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ABSTRACT

This publication includes reports of research on children in progress or recently completed from March 1973 through August 1973. Each entry includes information concerning the investigator, purpose, subjects, methods, duration, cooperating groups, and findings (if available). The reports are listed under several topical headings: (1) long-term research, (2) growth and development, (3) special groups of children, (4) the child in the family, (5) socioeconomic and cultural factors, (6) educational factors and services, (7) social services, and (8) health services. In addition to the reports on research, an extensive bibliography on juvenile delinquency is included. (BRT)

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ERIC Clearinghouse on Early Childhood Education

ERIC CLEARINGHOUSE
ON EARLY CHILDHOOD EDUCATION

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Director

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RESEARCH RELATING TO CHILDREN

Bulletin 32

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March 1973-August 1973

ERIC Clearinghouse on Early Childhood Education

NOTES: *Research Relating to Children* is prepared by the ERIC Clearinghouse on Early Childhood Education under the direction of Lilian G. Katz, Ph.D. Investigators who wish to submit abstracts of their research projects should address correspondence to:

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PREFACE

Research Relating to Children, Bulletin 32 includes reports of research in progress or recently completed research. With the exception of the section on Long-Term Research, it does not repeat studies included in *Bulletins 3* through *31*, even though they are still in progress. This issue, therefore, does not reflect all research relating to children, but only research reported to us from March 1973 through August 1973.

In addition to reports of current research, *Bulletin 32* contains a bibliography entitled *Juvenile Delinquency: A Bibliography*. The bibliography is divided into six sections: (1) Causes of Delinquency, (2) Delinquent Behavior, (3) Identification of Delinquents, (4) Prevention of Delinquency, (5) Rehabilitation of Delinquents, and (6) General Information on Juvenile Delinquency.

Publication references and plans are cited in the abstracts of research in the bulletin. The Clearinghouse, however, does not maintain information on the publications of the investigators. If you wish to obtain further details about any of the projects, please check professional journals in the appropriate field or write directly to the investigator.

Bulletin 32 is the last bulletin published by ERIC Clearinghouse for Early Childhood Education. We wish to thank investigators who have submitted reports of their research, and those who have informed us of other studies. We wish to acknowledge the valuable assistance of the Science Information Exchange and the foundations that provided us with information about their research grants.

Lillian G. Katz, Ph.D.
Director
ERIC Clearinghouse on Early Childhood Education

To Research Investigators:

This publication is only as complete as you are willing to make it. On page 161 you will find a form for reporting your current research. On page 165 you will find a form to let us know of other investigators who are working in the field. Please let us hear from you.

Research Relating to Children
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JUVENILE DELINQUENCY: A BIBLIOGRAPHY

Causes of Delinquency

Fisher, Sethard. Stigma and deviant careers in schools. *Social Problems*, Summer 1972, 20(1), 78-83.

Behavior Problems, *Conformity, Delinquency. *Delinquency Causes, *Junior High School Students, *Peer Groups, Self Concept, *Socially Deviant Behavior, Student Behavior

Fodor, Eugene M. Delinquency and susceptibility to social influence among adolescents as a function of level of moral development. *Journal of Social Psychology*, April 1972, 86(2), 257-260.

*Adolescents, Behavioral Science Research, *Individual Development, *Moral Values, Research Methodology, *Social Influences, Socially Deviant Behavior

Glaser, Daniel *et al.* Opiate addicted and non-addicted siblings in a slum area. *Social Problems*, Spring 1971, 18(4), 510-521.

*Delinquency Causes, *Drug Addiction, Family Background, *Individual Differences, *Siblings, *Slums, Social Adjustment, Social Attitudes, Social Reinforcement, Youth Opportunities

Granick, Samuel. *Emotional distress in ghetto deliquents.* 1966, 9 pp. ED 045 790.

Delinquency, *Delinquency Causes, *Delinquent Behavior, *Delinquents, *Emotionally Disturbed Children, Emotional Maladjustment, *Psychological Tests, Social Differences

Halloran, J. D. *et al. Television and delinquency.* 1970, 221 pp. ED 062 755.

Aggression, Delinquency, *Delinquency Causes, Delinquent Behavior, *Delinquents, Literature Reviews, *Social Behavior, Socially Deviant Behavior, *Television, *Television Viewing, Viewing Time, Violence

Jensen, Gary F. Delinquency and adolescent self-conception: A study of personal relevance of infraction. *Social Problems*, Summer 1972, 20(1), 84-102.

Behavior Problems, Delinquency, *Delinquency Causes, *Racial Differences, *Secondary School Students, *Self Concept, Social Differences, Socially Deviant Behavior, *Socioeconomic Status, Student Behavior

Jensen, Gary F. Parents, peers, and deliquent action: A test of the differential association perspective. *American Journal of Sociology,* November 1972, 78(3), 562-575.

Behavioral Science Research, Behavior Patterns, *Delinquency Causes, *Delinquent Behavior, *Parent Child Relationship, *Parent Influence, *Peer Relationship, Social Influences, Socially Deviant Behavior

Kelly, Delos H. Social origins and adolescent success patterns. *Education and Urban Society,* May 1972, 4(3), 351-365.

Adolescence, Adolescents, *Delinquency, *Delinquency Causes, Delinquent Bhavior, Social Class, *Social Status, Socially Deviant Behavior, Status Needs, Teenagers

McCandless, Boyd R. *et al.* Perceived opportunity, delinquency, race, and body build among delinquent youth. *Journal of Consulting and Clinical Psychology,* April 1972, 38(2), 281-287.

*Delinquency Causes, *Delinquents, *Disadvantaged Youth, Perception, Physical Characteristics, *Racial Differences, Youth Opportunities

Miller, Wilma H. and Windhauser, Eileen. Reading disability: Tendency toward delinquency? *Clearing House,* November 1971, 46(3), 183-187.

*Delinquency Causes, *Personality Problems, *Reading Difficulty, *School Responsibility, *Secondary School Students

Office of Juvenile Delinquency and Youth Development, Social and Rehabilitation Service (DHEW), Washington, D. C. *Legislative guide for drafting state-local programs on juvenile delinquency.* 1972, 47 pp. ED 061 535.

Delinquency, *Delinquency Causes, *Delinquency Prevention, Delinquents, *Legislation, Prevention, Program Design, Program Development, *Program Guides, Program Planning, Public Facilities, Public Policy, *State Programs, Youth

Peterson, Mayfield. Juvenile delinquency as a form of learning disability. *Connecticut Teacher,* November-December 1971, 39(2), 11-14 and 31.

*Delinquency, *Delinquency Causes, Emotionally Disturbed, Learning Difficulties, *Learning Disabilities

Russo, J. Robert. *A study of the effect upon the self concept of delinquents when interaction takes place with mental patients. Final report.* January 1970, 38 pp. ED 050 428.

Behavior Change, *Delinquency Causes, *Delinquent Identification, *Delinquent Identification, Delinquents, *Institutionalized (Persons), Mental Illness, Role Perception, Self Actualization, *Self Concept, *Self Esteem

Silberberg, Norman E. and Silberberg, Margaret C. School achievement and delinquency. *Review of Educational Research,* February 1971, 41(1), 17-33.

*Academic Failure, *Delinquency Causes, Educational Experience, *Etiology, *Intelligence Factors, Physiology, Reading Achievement, *Research Reviews (Publications), Social Mobility, Socioeconomic Influences

Tennent, T. G. School non-attendance and delinquency. *Educational Research,* June 1971, 13(3), 185-190.

*Attendance, *Delinquency Causes, *Maladjustment, *Social Adjustment, *Truancy

Underhill, Ruth M. (Ed.) *Youth problems on Indian reservations.* March 1970, 73 pp. ED 049 845.

*American Indians, *Conference Reports, Culture Conflict, *Delinquency Causes, Program Descriptions, *Reservations (Indian), Youth Opportunities, *Youth Problems

Wetmore, Peter (Ed.) *Alternatives to delinquency institutions. Institute Series Number 1.* June 1971, 27 pp. ED 058 341.

Adolescents, Anti Social Behavior, Behavior Problems, *Corrective Institutions, Decentralization, *Delinquency Causes, Delinquency Prevention, *Delinquent Rehabilitation, Delinquents, Emotionally Disturbed, Institutional Personnel, Personnel Selection, *Rehabilitation Programs, Self Concept, Self Esteem

Delinquent Behavior

Ardoff, David G. *Recent trends in the reading levels of delinquent boys.* April 1972, 20 pp. ED 062 086.

*Delinquency, Delinquency Causes, Delinquency Prevention, Delinquent Behavior, Delinquent Identification, Delinquents, *Educational Retardation, *Reading Failure, Reading Instruction, Remedial Reading, *Retarded, Readers

______________ Assaults on teachers. *Today's Education,* February 1972, 61(2), 30-32 and 69-71.

*Aggression, *Crime, Delinquency, *Delinquent Behavior, Hostility, Police School Relationship, Prevention, Social Factors, *Violence

Bednar, Richard L. *et al.* Operant conditioning principles in the treatment of learning and behavior problems with delinquent boys. *Journal of Counseling Psychology,* November 1970, 17(6) 492-497.

*Behavior Problems, *Delinquents, Learning, *Operant Conditioning, *Reading, Reinforcement

Beshai, James A. Behavioral correlates of the EEG in delinquents. *Journal of Psychology,* September 1971, 79, 141-146.

Behavioral Science Research, *Behavior Patterns, *Delinquents, Inhibition, Learning Processes, Learning Theories, Motivation, *Personality Theories, *Physiology, *Secondary School Students

Bonham, Frank. *Viva Chicano.* 1970, 179 pp. ED 046 562.

Crime, Culture Awareness, *Delinquency, Delinquent Behavior, *Ghettos, Law Enforcement, Library Materials, *Mexican Americans, Novels, *Rehabilitation, Rehabilitation Centers, Social Environments, *Youth Problems

Buffalo, M. D. and Rogers, Joseph W. Behavioral norms, moral norms, and attachment: Problems of deviance and conformity. *Social Problems,* Summer 1971, 19(1), 101-113.

*Behavioral Standards, Control Groups, *Delinquent Behavior, *Delinquents, *Group Norms, *Moral Values, Peer Groups, Socially Deviant Behavior

Cartwright, Desmond S. Children and youth in trouble. *Colorado Journal of Educational Research,* Spring 1971, 10(3), 2-15.

*Anti Social Behavior, *Community Responsibility, *Delinquent Behavior, *Negative Attitudes, Resentment, *Student Alienation

Chilton, Roland J. and Markle, Gerald E. Family disruption, delinquent conduct and the effect of subclassification. *American Sociological Review,* February 1972, 37(1), 93-99.

Cultural Disadvantagement, Delinquency, Delinquency Causes, *Delinquent Behavior, *Family Counseling, Family Environment, Family Problems, Family (Sociological Unit), *Parent Child Relationship

Closson, Fred I. Delinquency: Its prevention rests upon the academic community. *Clearing House* January 1971, 45(5), 290-293.

*Behavioral Objectives, *Delinquency Prevention, *Delinquent Behavior, *School Responsibility, *Teenagers

Cohen, Harold L. and Filipczak, James. *A new learning environment: A case for learning.* 1971, 214 pp. ED 057 143.

Conditioning, Delinquency, Delinquent behavior, *Delinquent Rehabilitation, *Delinquents, Environmental Influences, *Environmental Research, Learning Processes, *Operant Conditioning, *Reinforcement, Socially Maladjusted

Conrad, John J. Perceptions of juveniles in correctional institutions. *Journal of the Association for the Study of Perception,* Spring 1972, 7(1), 17-25.

*Delinquent Behavior, *Delinquent Identification, Delinquents, *Institutionalized (Persons), *Males, Negative Attitudes, *Self Concept

Desai, Arvindrai N. Institutional impact on juvenile delinquents. *Teaching,* March 1971, 43(3), 76-81.

Attitudes, *Behavior Patterns, *Delinquents, School Phobia, *Student School Relationship

Erickson, Maynard L. The group context of delinquent behavior. *Social Problems,* Summer 1971, 19(1), 114-129.

*Delinquent Behavior, *Delinquents, *Group Norms, Peer Acceptance, *Peer Groups, Peer Relationship, Youth Problems

Erickson, Robert V. and Roberts, Alan H. Some ego functions associated with delay of gratification in male delinquents. *Journal of Consulting and Clinical Psychology,* June 1971, 36(3), 371-382.

*Delinquent Behavior, Delinquents, *Goal Orientation, Individual Characteristics, *Need Gratification, Personal Values, *Psychological Characteristics

Farley, Frank H. and Farley, Sonja V. Stimulus-seeking motivation and delinquent behavior among institutionalized delinquent girls. *Journal of Consulting and Clinicial Psychology*, August 1972, 39(1), 94-97.

*Behavior Patterns, Corrective Institutions, *Delinquent Behavior, *Delinquents, Individual Differences, *Motivation, *Stimulus Behavior

eldhusen, John F. *et al. Early indentification of delinquency prone youth. The Eau Claire County Youth Study, Phase IV, 1969-1972.* March 1972, 152 pp. ED 062 059.

Academic Achievement, Court Cases, *Delinquent Behavior, Educational Problems, Health Conditions, Longitudinal Studies, Predictor Variables, Rural Urban Differences, *Rural Youth, *Social Adjustment, *Statistical Analysis, Tables (Data)

Fodor, Iris E. The use of behavior modification techniques with female delinquents. *Child Welfare*, February 1972, 51(2), 93-103.

*Behavior Change, Behavior Patterns, Correctional Rehabilitation, *Corrective Institutions, *Delinquent Behavior, Environmental Influences, *Females, Group Therapy, Positive Reinforcement, Staff Role

Furno, O. F. and Wallace, L. B. Vandalism! Recovery and prevention. *American School and University*, July 1972, 44(11), 19-20 and 22.

Costs, *Delinquent Behavior, Outdoor Lighting, *Parent Responsibility, *Vandalism

Hindelang, Michael J. Age, sex, and the versatility of delinquent involvements. *Social Problems*, Spring 1971, 18(4), 522-535.

*Adolescents, Catholic High Schools, Delinquency Causes, *Delinquent Behavior, *Delinquents, High School Students, *Sex Differences, Social Adjustment, Socioeconomic Status

Kunce, Joseph T. and Thelen, Mark H. Modeled standards of self-reward and observer performance. *Developmental Psychology*, September 1972, 7(2), 153-156.

Behavior Patterns, *Delinquents, *Imitation, *Males, Observational Learning, *Self Reward, Tables (Data), *Task Performance

Mentec Corporation, Los Angeles, California. *Operation Pathfinder: Shaping work behavior of ex-offenders and other disadvantaged people using social reinforcement techniques. Final report. (September 1969-April 1972).* April 1972, 98 pp. ED 070 840.

*Adjustment (To Environment), Behavior Counseling, *Behavior Change, *Delinquents, Demonstration Projects, *Disadvantaged Groups, Industrial Training, Job Development, *Manpower Development, Motivation, *Social Reinforcement, Supervisory Training, Work Attitudes, Work Environment

Milwaukee Public Schools, Milwaukee, Wisconsin. *A Title ESEA case study: The liaison teacher-returnee counselor project.* 1972, 26 pp. ED 066 436.

*Behavior Patterns, *Correctional Education, *Delinquent Rehabilitation, Educational Programs, *Recidivism

Powell, John W. School security: An emerging professionalism. *American School and University,* July 1972, 44(11), 12-15.

*Delinquent Behavior, Grants, *Professional Personnel, *Vandalism

Prentice, Norman M. The influence of live and symbolic modeling on promoting moral judgment of adolescent delinquents. *Journal of Abnormal Psychology,* October 1972, 80(2), 157-161.

*Child Psychology, *Delinquent Behavior, *Ethical Instruction, *Moral Values, Personality Assessment, Personality Studies, *Psychological Evaluation

Severy, Lawrence J. A review of social learning theories and exposure to delinquency. *Rehabilitation Research and Practice Review,* February 1970, 1(4).

*Associative Learning, *Delinquent Behavior, *Learning Theories, Motivation, Research Reviews (Publications)

Stein, Kenneth B. *et. al.* Further validation of antisocial personality types. *Journal of Consulting and Clinical Psychology,* April 1971, 36(2), 177-182.

*Anti Social Behavior, *Delinquent Behavior, *Delinquents, *Individual Characteristics, *Personality, Personality Assessment, Research Methodology, Socially Deviant Behavior

Stewart, Denton J. and Resnick, Jerome H. Verbal conditioning and dependency behavior in delinquents. *Journal of Abnormal Psychology,* December 1970, 76(3), 375-377.

*Behavior Science Research, *Delinquents, *Verbal Operant Conditioning

Tyler, Vernon O., Jr. and Kelly, Robert F. Predicting the behavior of institutionalized delinquents with—and without—Cattell's HSPQ. *Educational and Psychological Measurement,* Winter 1971, 31(4), 1019-1024.

*Behavior Rating Scales, *Delinquent Behavior, Diagnostic Tests, *Institutionalized (Persons), *Personality Tests, *Prediction, Test Reliability, Test Validity

Williams, Jay R. and Foster, Samuel C. From delinquent behavior to official delinquency *Social Problems,* February 1972, 20(2), 209-229.

*Adolescents, Delinquency, *Delinquent Behavior, Delinquents, *Juvenile Courts, *Law Enforcement, *National Surveys, Police Action, Socially Deviant Behavior, Socioeconomic Status

Identification of Delinquents

Cottle, William C. *Predicting potential delinquents in junior high school. Final report.* October 1969, 31 pp. ED 044 733.

Behavior Patterns, *Delinquent Behavior, *Delinquent Identification, Delinquents, Measurement Instruments, Prediction, *Predictive Ability (Testing), Predictive Measurement, *Test Construction, Tests

Cottle, William C. Identifying potential delinquents in junior high school. *Measurement and Evaluation in Guidance,* April 1972, 5(1), 271-276.

*Delinquency, Delinquency Prevention, *Delinquent Identification, *Delinquents, *Junior High School Students

Demsch, Berthold and Garth, Julia. Truancy prevention: A first step in curtailing delinquency proneness. *Journal of the International Association of Pupil Personnel Workers,* June 1971, 15(3), 119-129.

*Attendance Patterns, *Delinquency, Delinquent Identification, *Maladjustment, *Pupil Personnel Services, Students, *Truancy, *Urban Youth

Ewing, Dorlesa Barmettler. *The relationship between anomie, dogmatism and selected personal-social factors among asocial adolescent boys.* February 1971, 30 pp. ED 047 856.

Anglo Americans, Anti Social Behavior, Attitudes, *Cross Cultural Studies, Cultural Background, *Delinquent Identification, Dogmatism, *Grade 11, *Males, Mexican Americans, Negro Youth, *Psychological Patterns, Research, Social Factors, Tables (Data)

Feldhusen, John F. *et al. Prediction of social adjustment over an 8-year period: Correlates and long-range implications of classroom aggression. Prediction of academic achievement of children who display aggressive-disruptive classroom behavior.* February 1971, 44 pp. ED 047 334.

*Academic Achievement, Adjustment (To Environment), Adjustment Problems, *Behavior Problems, *Delinquency, Delinquency Causes, Delinquency Prevention, *Delinquent Identification, *Elementary School Students, *Identification, Low Achievers, Maladjustment, Prediction, Problem Children, *Social Adjustment, Underachievers

Feldhusen, John F. *et al.* Prediction of delinquency, adjustment, and academic achievement over a 5-year period with the Kvaraceus Delinquency Proneness Scale. *Journal of Educational Research,* April 1972, 65(8), 375-381.

Academic Achievement, *Criteria, Delinquency, *Delinquent Identification, *Predictive Ability (Testing), *Predictive Validity, Reading Achievement, Social Adjustment

Feldhusen, John F. *et al. Prediction of youth contacts with law agencies over an 8-year period.* April 1972, 18 pp. ED 063 559.

Cultural Disadvantagement, *Delinquency, *Delinquency Causes, Delinquency Prevention, Delinquent Behavior, *Delinquent Identification, *Delinquents, Etiology, Socially Deviant Behavior

Follman, John *et al.* Delinquency prediction scales and personality inventories. *Child Study Journal,* 1972, 2(2), 99-103.

Correctional Institutions, *Delinquent Identification, Institutionalized (Persons), *Measurement Instruments, *Personality Assessment, *Predictive Measurement, *Rating Scales

Hooke, James F. Correlates of delinquent behavior. *Psychological Reports,* June 1971, 28(3), 795-800.

*Adolescents, Anti Social Behavior, *Behavior Patterns, *Delinquents, Family Structure, *Identification Tests, *Individual Characteristics, Individual Differences, Predictive Validity, Test Reliability

House Committee on Education and Labor, Congress of the United States, Washington D. C. *Hearings before the General Subcommittee on Education of the Committee on Education and Labor, House of Representatives, 92nd Congress, First session on H. R. 6247; a bill to extend the provisions of the Juvenile Delinquency Prevention and Control Act of 1968 for 5 years.* 1971, 393 pp. ED 054 245.

Criminals, Criminology, Delinquency, Delinquency Causes, *Delinquency Prevention, *Delinquent Identification, *Delinquent Rehabilitation, Drug Abuse, *Federal Aid, *Federal Legislation, Juvenile Courts, Juvenile Gangs

Larson, James D. *et al.* Social class, reported parental behavior and delinquency status. *Psychological Reports,* February 1971, 28(1), 323-327.

Behavioral Science Research, Behavior Patterns, *Delinquency, Delinquent Identification, Measurement, *Parent Child Relationship, *Parent Influence, Perception, *Social Class, *Socioeconomic Influences

Thelen, Mark H. and Fryrear, Jerry L. Imitation of self-reward standards by black and white female delinquents. *Psychological Reports,* October 1971, 29(2), 667-671.

*Delinquents, Family Structure, Females, Identification (Psychological), *Imitation, Parent Role, *Racial Differences, Reinforcement, *Self Reward, *Sex Differences

Truax, Charles B. Counselor focus on client anxiety source and client outcome in juvenile delinquents. *Canadian Counselor,* January 1971, 5(3), 57-60.

Adolescents, *Anxiety, Behavior Patterns, Counseling Effectiveness, Counselor Acceptance, *Counselor Performance, *Delinquents, Group Counseling, *Psychological Patterns

Prevention of Delinquency

American Institutes for Research, Palo Alto, California. *Police youth protection unit programs, San Jose, California: Model programs. Childhood education.* 1970, 26 pp. ED 045 528.

Community Services, Counseling Services, *Delinquency Prevention, Junior High School Students, Juvenile Courts, Law Enforcement, *Law Instruction, *Police School Relationship, *Social Studies, *Youth Programs

Andenaes, Johannes. The moral or educative influence of criminal law. *Journal of Social Issues*, Spring 1971, 27(2), 17-31.

*Crimes, *Delinquency Prevention, Ethical Instruction, *Laws, *Legal Problems, Moral Values, *Psychological Studies, Socialization

Brenton, Myron. Delinquency deflected. *American Education*, April 1972, 8(3), 25-28.

*Delinquency Prevention, Disadvantaged Groups, Educational Responsibility, *Parent Student Relationship, State Agencies, *Student School Relationship, *Youth, *Youth Agencies

Burchard, John D. *Behavior modification with delinquents: Some unforeseen contingencies.* March 1971, 10 pp. ED 054 491.

*Behavior Change, Behavior Problems, Correctional Rehabilitation, Criminals, *Delinquency Prevention, *Delinquent Rehabilitation, Delinquents, *Operant Conditioning, Prisoners, Program Descriptions, *Rehabilitation Programs, Reinforcement

______________ Curbing vandalism costs. *Nation's Schools*, June 1972, 89(6), 46-49.

Costs, *Delinquency Prevention, *Electronic Instruments, Library Equipment, *School Administration, *Security, *Vandalism

East Chicago City School District, East Chicago, Indiana. *East Chicago Junior Police: An effective project in the non-academic area of the school's total educational attack on the disadvantagement of youth.* December 1970, 65 pp. ED 053 241.

After School Program, Behavior Problems, Child Development, *Delinquency Prevention, *Disadvantaged Youth, Health Activities, Music Activities, *Police School Relationship, Program Descriptions, Program Design, Program Effectiveness, Program Evaluation, School Community Programs, Volunteers, Youth Clubs, Youth Problems, *Youth Programs

Griffin, James B. Discrimination in public education. *NASSP Bulletin*, November 1971, 55(358), 87-90.

*Counselor Client Ratio, *Delinquency Prevention, *Equal Education, *Low Income Groups, *Teacher Influences

Lemert, Edwin M. *Instead of court: Diversion in juvenile justice. Crime and delinquency issues: A monograph series.* 1971, 102 pp. ED 061 431.

*Community Agencies (Public), *Community Role, *Delinquency Prevention *Delinquent Rehabilitation, Delinquents, Juvenile Courts, Law Enforcement, *Models, Police Action, School Responsibility, School Role, Welfare Agencies, Welfare Services, Youth Problems

McGerigle, Paul. *What Massachusetts does about the apprehended juvenile offender.* December 1970, 60 pp. ED 053 399.

Correctional Rehabilitation, Courts, *Delinquency, *Delinquency Prevention, *Delinquent Rehabilitation, Delinquents, *Juvenile Courts, Law Enforcement, Police, Probationary Period, *Probation Officers, Socially Deviant Behavior, Youth Problems

Nesbitt, Buell *et al.* (Ed.) *Legal guide for Alaska youth.* 1967, 27 pp. ED 059 144.

Citizenship, *Civil Liberties, Curriculum Guides, *Delinquency Prevention, Junior High School Students, *Juvenile Courts, Law Enforcement, *Law Instruction, Laws, Legal Responsibility, Secondary Grades, *State Laws, Youth, Youth Problems

Parker, Harold K. and Masuda, Richard. Opportunity schools. *NASSP Bulletin,* April 1971, 55(354), 37-45.

*Delinquency, *Delinquency Prevention, *Educational Objectives, *Educational Programs, *Opportunity Classes

Peacock, Sheila M. 4-H stages a "Groove-In." *Extension Service Review,* May 1971, 42(5), 3.

*Delinquency Prevention, Workshops, *Youth Programs

Pooley, Richard, *An experiment in delinquency prevention and control.* August 1971, 217 pp. ED 055 376.

*Behavior Change, *Case Studies, *Delinquents, *Emotionally Disturbed, *Exceptional Child Research, Operant Conditioning, Reinforcement, Social Adjustment

Reeves, David E. Protecting against fire and vandalism. *American School and University,* May 1972, 44(9), 62-66.

*Delinquency Prevention, *Electronic Control, *Electronic Equipment, *Fire Protection, Security, *Vandalism

Reid, John B. and Hendriks, A. F. C. J. *A preliminary analysis of the effectiveness of direct home intervention of treatment of predelinquent boys who steal. Volume 12, Number 8.* 1972, 19 pp. ED 068 877.

Anti Social Behavior, Crime, Criminals, Delinquency, Delinquency Causes, *Delinquency Prevention, Delinquent Behavior, Delinquent Identification, *Delinquent Rehabilitation, Delinquents, Males, Program Descriptions, *Socialization, *Socially Deviant Behavior, *Stealing, Violence

Slaybaugh, David J. and Koneval, Virginia L. *The high cost of vandalism.* 1970, 12 pp. ED 049 537.

*Costs, *Delinquency Prevention, Fire Insurance, *School Surveys, *School Vandalism

______________ Vandals don't like the spotlight. *American School and University,* January 1971, 43(5), 26-28.

*Delinquency Prevention, *Lighting, *Lights, *School Vandalism, Vandalism

Weinberg, Isolde Chapin. *Volunteers help youth.* 1971, 63 pp. ED 061 513.

*Delinquency Prevention, Disadvantaged Youth, Drug Abuse, Health Services, *Human Services, Job Skills, Law Enforcement, Leadership Training, Rehabilitation Programs, Self Help Programs, Social Services, Sociopsychological Services, *Volunteers, *Volunteer Training, *Youth Programs

Rehabilitation of Delinquents

Aaron, Robert L. *Design concepts for contingency management of delinquent adolescents.* December 1971, 10 pp. ED 061 016.

*Adolescents, *Behavior Change, *Delinquent Rehabilitation, Diagnostic Teaching, *Positive Reinforcement, *Reading Difficulty, Reading Interests, Rewards, Visual Perception

Bayh, Birch. Toward juvenile justice. *American Scholar,* Autumn 1971, 40(4), 662-666.

Corrective Institutions, Delinquency, *Delinquent Rehabilitation, *Juvenile Courts

Burke, David. *Upward Bound/Los Angeles County Probation Department Program Report.* 1969, 28 pp. ED 042 826.

Academic Aspiration, Corrective Institutions, Counselor Evaluation, Decision Making, *Delinquent Rehabilitation, *Disadvantaged Youth, *Group Dynamics, Institutional Role, Probationary Period, Secondary Education, Social Differences, Student Adjustment, *Student Evaluation, Student Motivation, Teacher Evaluation

California State Department of the Youth Authority, Sacramento, California. *Compensatory education 1970-71. Program description and evaluation: Elementary and Secondary Education Act Title I.* December 1971, 57 pp. ED 061 350.

*Compensatory Education Programs, *Delinquent Rehabilitation, Delinquents, Educationally Disadvantaged, Low Achievers, *Program Evaluation, Rehabilitation Programs, *Remedial Instruction, Remedial Mathematics, Remedial Programs, Remedial Reading

______________ Hearing and speech behind bars. *Hearing and Speech News,* July-August 1971, 39(4), 4-7.

*Adult Programs, Delinquency Causes, *Delinquent Rehabilitation, Emotional Adjustment, *Experimental Programs, Field Experience Programs, *Hearing Therapy, Rehabilitation Programs, *Speech Therapy, Stuttering

Hussey, Frederick A. *et al. An experiment in change (Girls Residential Youth Center, Portland, Maine--Phase II. Final report and evaluation).* March 1970, 237 pp. ED 057 219.

*Delinquent Rehabilitation, *Disadvantaged Youth, Employment Problems, Experimental Programs, *Females, Occupational Guidance, Program Evaluation, Residential Centers, Vocational Rehabilitation, *Youth Programs

Norfleet, Morris L. *Advisory council report: Project Newgate, Federal Youth Center, Ashland, Kentucky.* July 1969, 20 pp. ED 066 534.

*Advisory Committees, College Instruction, *Correctional Education, *Delinquent Rehabilitation, Educational Development, Individual Development, *Program Descriptions, Program Evaluation, Student Interests, Teacher Attitudes

Osborne, Thomas J. *New doors for Newgate.* 1971, 23 pp. ED 064 572.

Bibliographies, *Correctional Rehabilitation, Corrective Institutions, *Course Evaluation, Criminology, *Delinquent Rehabilitation, Delinquents, Educational Opportunities, Individual Development, *Program Evaluation, *Rehabilitation Programs, Youth Programs

______________ Profile of a school 8/Kawartha Lakes School, Lindsay. *Orbit,* February 1971, 2(1), 28.

Academic Education, *Correctional Education, Corrective Institutions, *Delinquent Rehabilitation, *Females, Vocational Education

Rehabilitation Service Division, Oklahoma State Board for Vocational Education, Stillwater, Oklahoma. *Vocational rehabilitation in juvenile delinquency: A planning grant to determine the role of vocational rehabilitation in juvenile delinquency. Final report. Research and demonstration project (July 1, 1963-June 30, 1964).* 1964, 49 pp. ED 052 334.

*Delinquent Rehabilitation, *Educational Needs, Mentally Handicapped, Physical Handicaps, Program Coordination, Program Descriptions, *Program Design, Vocational Education, *Vocational Rehabilitation, *Youth Problems

Richardson, Charles and Meyer, Robert G. Techniques in guided group interaction programs. *Child Welfare,* October 1972, 51(8), 519-527.

*Behavior Change, Conflict Resolution, *Control Groups, *Delinquent Rehabilitation, *Group Therapy, *Peer Acceptance, Socially Deviant Behavior

Shapiro, Jerold L. and Ross, Robert R. Sensitivity training for staff in an institution for adolescent offenders. *Journal of Applied Behavioral Science,* November 1971, 7(6), 710-723.

Adolescents, *Corrective Institutions, Counseling Effectiveness, *Delinquent Rehabilitation, *Sensitivity Training, *Staff Improvement, T Groups, *Training Techniques

Southwest Indian Youth Center, Tucson, Arizona. *Program description: Southwest Indian Youth Center.* May 1971, 25 pp. ED 052 856.

Academic Ability, *Adolescents, *American Indians, Attitudes, Community Involvement, *Delinquent Rehabilitation, Discipline, Job Skills, Leisure Time, *Rehabilitation Programs, Selection, *Self Actualization, Social Development, Work Attitudes

Tornquist, Elizabeth. Juvenile corrections in North Carolina. *New South*, Summer 1971, 26(3), 63-68.

*Correctional Rehabilitation, *Delinquent Rehabilitation, Institutionalized (Persons), *Rehabilitation Programs, *State Programs

Trotter, Joseph A., Jr. (Ed.) *Project Crossroads. Final report.* 1971, 19 pp. ED 055 155.

Correctional Rehabilitation, *Delinquent Rehabilitation, *Demonstration Projects, *Job Placement, *Manpower Development, Out of School Youth, Prisoners, *Probationary Period, Recidivism

Vachon, Brian. Hey man, what did you learn in reform school? *Saturday Review: Education*, October 1972, 55(38), 69-76.

*Corrective Institutions, *Delinquent Rehabilitation, *Recidivism, *Rehabilitation Programs, Social Reinforcement

Wohlers, A. E. and Conrad, M. J. *A recommended plan of action for the Ohio Youth Commission. A cooperative project by selected staff members of the Ohio Youth Commission and the staff of the Educational Administration and Facilities Unit of the College of Education of the Ohio State University.* 1971, 149 pp. ED 050 468.

Delinquent Identification, *Delinquent Rehabilitation, Individualized Programs, Individual Needs, Need Gratification, *Program Evaluation. *Socially Deviant Behavior, *Youth Problems, *Youth Programs

General Information on Delinquency

Ahlstrom, Winston M. and Havighurst, Robert J. *Four hundred losers: Delinquent boys in high school.* 1971, 246 pp. ED 047 453.

Adolescents, Attitudes, *Delinquents, *Exceptional Child Research, *Failure Factors, Family Influence, Longitudinal Studies, Males, Sexuality, Social Influences, *Socially Maladjusted, Sociocultural Patterns, *Work Study Programs

Anderson, M. Phineas. *The gang unit.* 1970, 197 pp. ED 049 085.

*City Problems, *Juvenile Gangs, Problem Solving, Racial Discrimination, Resource Materials, Secondary Grades, Simulation, Social Discrimination, *Social Studies Units, Urban Culture, Urban Teaching, *Urban Youth, *Violence, Youth Problems

Bhagat, M. and Fraser, W. I. The meaning of concepts to the retarded offender. *American Journal of Mental Deficiency*, November 1970, 75(3), 260-267.

Concept Formation, *Delinquency, *Delinquents, *Exceptional Child Research, *Mentally Handicapped, *Vocabulary

Burns, J. L. Delinquents failed by the system. *Special Education*, March 1971, 60(1), 13-16.

Classification, *Corrective Institutions, Delinquency, *Delinquents, *Educational Needs, Educational Therapy, Socially Deviant Behavior

Cannon Cressy. The culture of delinquency. *Times (London) Educational Supplement*, August 1971, No. 2934, 4.

*Delinquency, *School Role, *Social Factors

Carey, James T. *et al. The handling of juveniles from offense to disposition, Vol. 1.* 1967, 255 pp. ED 060 206.

Bibliographies, *Case Studies, *Court Litigation, *Delinquency, Delinquency Prevention, Delinquent Behavior, Delinquent Rehabilitation, Delinquents, Inservice Education, Juvenile Courts, Manuals, Police Action, *Probation Officers, Socially Deviant Behavior, *Study Guides, Youth Problems

Carey, James T. *et al. The handling of juveniles from offense to disposition, Vol. 2.* 1967, 288 pp. ED 060 207.

Bibliographies, Case Studies, *Court Litigation, *Delinquency, Delinquency Prevention, Delinquent Behavior, Delinquent Rehabilitation, Delinquents, Inservice Education, Juvenile Courts, Manuals, Police Action, *Probation Officers, Socially Deviant Behavior, *Study Guides, Youth Problems

Carey, James T. *et al. The handling of juveniles from offense to disposition, Vol. 3, Instructor's guide.* 1967, 67 pp. ED 060 208.

Bibliographies, *Case Studies, *Court Litigation, *Delinquency, Delinquency Prevention, Delinquent Behavior, Delinquent Rehabilitation, Delinquents, Inservice Education, Juvenile Courts, Police Action, *Probation Officers, Socially Deviant Behavior, *Teaching Guides, Youth Problems

Collingwood, Thomas R. *Survival camping: A therapeutic mode for rehabilitating problem youth.* 1971, 55 pp. ED 060 594.

Adolescents, *Camping, *Delinquents, *Emotionally Disturbed, *Exceptional Child Services, Males, Physical Activities, Program Descriptions, *Rehabilitation Programs

Creek, Leon Vande and Bath, John. A preliminary view of trends in age, education, and intelligence of problem youth. *Journal of Genetic Psychology*, December 1970, 117(2), 219-225.

Adolescents, *Age, *Delinquents, *Educational Background, Individual Characteristics, *Institutionalized (Persons), *Intelligence Level, Problem Children

Davis, Charles and Fanton, James H. A delinquency predictive scale for Thorne's Integration Level Test Series. *Journal of Clinical Psychology*, April 1972, 28(2), 186-189.

*Delinquency, High School Students, Institutionalized (Persons), *Item Analysis, *Measurement Instruments, *Predictive Ability (Testing), *Predictive Validity, Response Mode, Tables (Data)

DeRosis, Helen A. Violence: Where does it begin? *Family Coordinator*, October 1971, 20(4), 355-362.

*Aggression, *Crime, *Delinquency, Demonstrations (Civil), *Family Influence, *Violence

Dodge, Calvert R. *Communicating with youth: The adolescent offender and his counselor (research report).* 134 pp. Available from: Librarian, Colorado Youth Workers Training Center, P.O. Box 286,. 3650 West Princeton Circle, Fort Logan, Colorado 80115. No price indicated.

Adolescents, Communication (Thought Transfer), *Correctional Rehabilitation, *Counseling Services, Data Analysis, Data Collection, *Delinquency, Environmental Influences, Interaction Process Analysis, *Interpersonal Relationship, Literature Reviews, Reading Comprehension, Recidivism, Research Methodology, Tests, *Youth Programs

Dodge, Calvert R. (Ed.) *Training youth workers in the field of juvenile delinquency.* January 1970, 155 pp. ED 068 846.

Adults, Correctional Rehabilitation, *Delinquency, *Generation Gap, Interpersonal Relationahip, Job Training, Minority Groups, *Social Change, *Training Techniques, *Youth Programs

Duncan, Pam. Parental attitudes and interactions in delinquency. *Child Development*, December 1971, 42(6), 1751-1765.

Behavior Rating Scales, *Delinquents, Discipline, *Females, *Parent Attitudes, *Parent Child Relationship, Parent Influence, *Psychological Studies, Social Behavior, Tables (Data)

Feldman, Ronald A. *et al.* Treating delinquents in traditional agencies. *Social Work*, September 1972, 17(5), 71-78.

Agency Role, Delinquent Behavior, *Delinquents, *Group Structure, *Social Agencies, *Socially Deviant Behavior, Social Services

Gersh, Wesley A. Double jeopardy and the juvenile. *Journal of Family Law*, 1972, 11(3), 603-614.

*Civil Rights, Court Cases, Delinquent Rehabilitation, *Delinquents, *Due Process, *Juvenile Courts, Youth, Youth Problems

Gilman, Merritt and Gorlich, Elizabeth. *Group counseling with delinquent youth.* 1968, 45 pp. ED 068 870.

*Counseling, *Delinquency, *Delinquent Rehabilitation, Group Counseling, Group Dynamics, Group Guidance, Groups, Integroup Relations, Leadership, Leadership Responsibility, Youth, Youth Problems, *Youth Programs

Gormly, John and Nittoli, Michael J. Rapid improvements of reading skills in juvenile delinquents. *Journal of Experimental Education*, Winter 1971, 40(2), 45-48.

Delinquency, *Delinquents, Improvement, *Institutionalized (Persons), Motivation, Programed Instruction, *Reading Instruction, Reading Materials, *Reading Skills, *Research Methodology

Harrison, Don K. *Special populations: Culturally different and others. Information analysis report.* December 1970, 55 pp. ED 048 621.

*Culturally Disadvantaged, Delinquency, *Delinquents, *Dropouts, *Educational Research, Emotionally Disturbed, *Ethnic Groups, Handicapped, Information Sources, *Literature Reviews, Mentally Handicapped, *Minority Groups, Physically Handicapped, *Research Reviews (Publications)

Hoover, J. Edgar. Focus for tomorrow. *School and Society,* February 1972, 100(2339), 84-86.

*American Culture, Crime, *Delinquency, *Ethical Values, *Moral Values, Social Environment

Hughes, John F. *Title I ESEA in institutions for neglected and delinquent children.* 1967, 31 pp. ED 053 430.

Counseling Effectiveness, *Counseling Services, Delinquent Rehabilitation, *Delinquents, Educational Improvement, Educational Needs, Educational Programs, Educational Responsibility, *Institutional Role, Institutional Schools, Institutions, Instructional Improvement, *Instructional Innovation, Instructional Materials, *Instructional Programs

Information Center on Exceptional Children, Council for Exceptional Children, Arlington, Virginia. *Juvenile delinquency: Exceptional child bibliography series.* February 1971, 13 pp. ED 054 571.

*Annotated Bibliographies, *Bibliographies, *Delinquency, *Delinquents, *Exceptional Child Education, Research Projects

Kulik, James A. *et al.* Language, socialization, and delinquency. *Developmental Psychology,* May 1971, 4(3), 434-439.

*Delinquency, High School Students, Idioms, *Language Styles, Males, *Socialization, *Socioeconomic Influences, Vocabulary

Lerman, Paul. Child convicts. *Transaction,* July-August 1971, 8(9/10), 35-44 and 72.

Child Welfare, Corrective Institutions, Court Litigation, *Court Role, Cultural Factors, *Delinquency, Delinquent Rehabilitation, *Discriminatory Attitudes (Social), *Juvenile Courts, *Social Environments

Marani, Salvatore D. Effects of methods of teaching reading on reading achievement and attitudes toward self of delinquent boys. (Doctoral dissertation, University of Maryland.) 1971, 95 pp. Available from: University Microfilms, A Xerox Company, Dissertation Copies, P. O. Box 1764, Ann Arbor, Michigan 48106. (Order No. 72-10,078: MFilm, $4.00; Xerography, $10.00.)

Attitudes, *Delinquency, *Individualized Reading, Reading, *Reading Achievement, Reading Programs, *Reading Research, *Small Group Instruction

Metz, Marshall T. and Miller, Monroe J. *What type of communication increases understanding between delinquents and their parents?* May 1971, 8 pp. ED 050 370.

*Communication Problems, Delinquency, *Delinquents, *Family (Sociological Unit), *Interpersonal Relationship, *Parent Child Relationship, Tape Recordings

Morehead State University, Morehead, Kentucky. *Statistical study of the initial group chosen for Project Newgate at the Federal Youth Center, Ashland, Kentucky.* September 1969, 15 pp. ED 066 636.

*Age, Caucasians, Corrective Institutions, *Delinquents, *Geographic Distribution, Males, *Mental Development, Negroes, *Racial Composition, Research Reviews (Publications), Statistical Studies, Student Characteristics, Test Results, Young Adults

Piersma, Paul. *The legal rights of secondary school children charged with an act of delinquency or violation of school laws.* 1972, 61 pp. ED 063 571.

*Court Litigation, *Delinquency, Delinquents, Legal Aid, *Legal Problems, *Legal Responsibility, Police School Relationship, Pupil Personnel Workers, Secondary Education, *Secondary School Students, Secondary School Teachers

Schlichter, K. Jeffrey and Ratliff, Richard G. Discrimination learning in juvenile delinquents. *Journal of Abnormal Psychology,* February 1971, 77(1), 46-48.

*Delinquency, *Discrimination Learning

Schultz, Edward W. *et al. Educational services for emotionally handicapped children in Illinois residential centers.* May 1972, 71 pp. ED 063 712.

*Delinquents, *Educational Opportunities, *Emotionally Disturbed, *Exceptional Child Research, Residential Programs, Statistical Data

Severino, Michael. Who pays--or should pay--when young vandals smash things up in your schools? *American School Board Journal,* June 1972, 159(12), 33-34.

*Boards of Education, *Delinquency, Delinquency Prevention, *Legal Responsibility, Legislation, *Vandalism

Silverman, Mitchell. *An analysis of a comprehensive evaluation model for guided group interaction techniques with juvenile delinquents. Final report.* December 1970, 83 pp. ED 047 340.

*Behavioral Objectives, Data Collection, *Delinquents, Group Therapy, Guidance Programs, *Interaction Process Analysis, Learning, Measurement Techniques, Scoring, *Techniques

Teichman, Meir. Ego defense, self-concept and image of self ascribed to parents by delinquent boys. *Perceptual and Motor Skills,* June 1971, 33(3), 819-823.

Adolescents, *Attitudes, *Delinquents, Emotional Adjustment, Individual Differences, Males, *Parent Child Relationship, Parent Role, *Perception, *Self Concept

Tymchuk, Alexander J. *Effects of verbal concept training versus stimulus enhancement on verbal abstracting in institutionalized retarded delinquent boys. IMRID papers and reports, Volume VIII, No. 1.* 1971, 125 pp. ED 058 685.

*Concept Formation, *Delinquents, *Exceptional Child Research, Institutionalized (Persons), Males, *Mentally Handicapped, Verbal Ability, *Verbal Learning

Walberg, Herbert J. Urban schooling and delinquency: Toward an integrative theory. *American Educational Research Journal,* Spring 1972, 9(2), 285-300.

*Behavioral Science Research, *Delinquency, Family Influence, High School Students, *Measurement Instruments, *Psychological Patterns, Socioeconomic Influences, Student Attitudes, Tables (Data), *Urban Schools

Weber, J. Robert and Custer, Carson. *Youth involvement.* 1970, 35 pp. ED 046 010.

Change Agents, Community Development, *Decision Making, *Delinquency, Program Design, Social Change, *Youth, Youth Problems, *Youth Programs

Zelhart, Paul F., Jr. RPM correlates of attitudes toward delinquency: Before and after contact with delinquents. *Psychological Reports,* August 1971, 29(1), 293-294.

*Changing Attitudes, *Delinquents, Discrimination Learning, Interpersonal Relationship, Organization, *Perception, *Staff Role, Test Reliability

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LONG-TERM RESEARCH

Note: The reports in this section concern
research programs that are continuous.

32-AA-1 LONGITUDINAL STUDY OF CHILD GROWTH AND DEVELOPMENT

Investigator(s): Lester W. Sontag, M.D., Director Emeritus; and Frank Falkner, M.D., Director, Fels Research Institute for the Study of Human Development, Antioch College, 800 Livermore Street, Yellow Springs, Ohio 45387.

Purpose: To study adult personality, adjustment, and aging processes of subjects whose health, growth, personality development, and environment have been studied since birth.

Methods: The program included a study of the aging processes of the subjects' parents in relation to physical and biochemical measures made earlier. It will include studies of parental childrearing practices in the same families for two generations, constancy of autonomic response patterns to stress from childhood to young adulthood, and the relationship of response patterns to psychosomatic disorders in adulthood. Blood lipids in relation to body composition and change in composition will also be studied.

Cooperating group(s): Public Health Service, U. S. Department of Health, Education, and Welfare.

32-AA-2 LONGITUDINAL CROSS-CULTURAL STUDY OF ADOLESCENT AND YOUNG ADULT DEVELOPMENT

Investigator(s): Harben Boutourline-Young, M.D., Associate Clinical Professor, Department of Pediatrics and Department of Public Health, Yale University School of Medicine, New Haven, Connecticut 06520. (Dr. Boutourline-Young was formerly a Research Associate, School of Public Health, Harvard University, Boston, Massachusetts 02115.)

Purpose: To observe the long-term effects of environment on growth and health, i.e., the influence of environmental factors upon physical and mental development, and their mode of action and interaction with genetic endowment.

Subjects: 343 subjects with a common ethnic origin (grandparents from the same geographic zone of Southern Italy), 96 of whom now reside in Boston, Massachusetts; 127, in Rome, Italy; and 120, in Palermo, Italy. The subjects were studied from pre- or early puberty to young adulthood.

Methods: Data were collected through standard anthropometric measurements, physical health appraisals, measures of cognitive development, measures of personality development, measures of environmental influences (particularly the family), personal interviews, smoking and drinking patterns, alienation, creativity, moral values, and socioeconomic and psychosocial evaluations.

Findings: Results indicate increased anthropometric measurements (notably fat and weight) in the American resident subjects. No differences were found in physical performance. Marked differences were found in both directions in aspects of health. The Roman subjects' performance on creativity tests was superior.

Duration: 1956-1973.

Cooperating group(s): University of Rome; University of Palermo, Grant Foundation, New York; Harvard University, School of Public Health, Boston.
Publications: Boutourline-Young, H. The physiology of adolescence (including puberty and growth). In J. O. Howells (Ed.), *Modern perspectives in adolescent psychiatry*. Edinburgh: Oliver and Boyd, 1971; Ferguson, L. C.; Ferguson, L. R.; Boutourline-Young, H. Comparative political studies of Italians and Italo-Americans. *Comparative Political Studies*, 1972, 16, 85-92; Boutourline-Young, H. Genetics and environment as factors in child development. *World Medical Journal*, 1972, 3, 47-48.

32-AA-3 CHILD HEALTH AND DEVELOPMENT STUDIES

Investigator(s): Jacob Yerushalmy, Ph.D., Professor of Biostatistics, School of Public Health, University of California at Berkeley, Berkeley, California 94720; Stephen Thomas, M.D., Director, Department of Obstetrics and Gynecology; and Edgar Schoen, M.D., Director, Department of Pediatrics, Kaiser Foundation Hospital, Oakland, California 94611.
Purpose: To investigate the relationship of parents' biologic, genetic, and environmental influences (including events during pregnancy, labor, and delivery) to the normal and abnormal development of offspring.
Subjects: Members of the Kaiser Foundation Health Plan (a prepaid medical care program) who reside in the San Francisco-East Bay area.
Methods: Expected byproducts of the investigation are the relationships of factors studied to (1) wasted pregnancies in the forms of early fetal death, perinatal mortality, infant and child mortality; and (2) estimates of the incidence of different types of abnormalities. The study is a prospective, longitudinal type involving both mother and child. Gravidas in the Department of Obstetrics and children in the Pediatric Department are observed, interviewed, and given laboratory examinations. Physicians' observations are systematized uniformly. Special efforts are made to obtain information on members of the study who do not return to the plan for medical care. Detailed growth curves for children, ages birth to 6, and estimates of illnesses and injuries in infancy and the preschool child will be derived on a longitudinal basis.
Duration: July 1959-indefinite.
Cooperating group(s): Permanente Medical Group; Kaiser Foundation Research Institute.
Publications: *Journal of Pediatrics*, August 1967, 71(2), 164-172; *Pediatrics*, 1967, 39, 940-941; *American Journal of Obstetrics and Gynecology*, February 15, 1964, 88(4), 505-518.

32-AA-4 THE BERKELEY, CALIFORNIA GROWTH STUDY

Investigator(s): Dorothy H. Eichorn, Ph.D., Research Psychologist, Institute of Human Development, University of California at Berkeley, Berkeley, California 94720.
Purpose: To study the mental and physical growth of normally healthy persons from birth to the present.
Subjects: 60 full-term, healthy newborns, born in Berkeley hospitals in 1928 to 1929 of white, English-speaking parents; and 140 offspring of these subjects, ages birth to 20, seen irregularly.
Methods: The same data, appropriate for age, were collected for the subjects and their offspring. Beginning in the first week of life, tests of mental and motor development, pediatric examinations, and interviews were conducted at frequent intervals during growth. At all visits, inquiries were made concerning current health and recent illnesses. Anthropometrics, body photographs, and skeletal X-rays were taken at most ages. Socio-

economic data were collected. Studies of the physical aspects of growth include analyses that compare health histories with physical growth and with skeletal maturation. Emotional and other personality variables are being studied for consistency, and in various interrelations with maternal behavior in infancy, birth histories, socioeconomic status, and intellectual and physical growth.
Duration: 1928-continuing.
Publications: *American Psychologist*, 1968, 23(1), 1-17; *Monograph of the Society for Research in Child Development*, 1963, 28; Bayer, Leona and Bayley, Nancy. *Growth diagnosis: Selected methods for interpreting and predicting physical development from one year to maturity.* Chicago: University of Chicago Press, 1959.

32-AA-5 GROWTH OF PSYCHOPHYSIOLOGICAL PATTERNS IN INFANCY

Investigator(s): Wagner H. Bridger, M.D., Associate Professor of Psychiatry; and Beverly Birns, Ph.D., Assistant Professor of Psychology, Albert Einstein College of Medicine, Yeshiva University, Bronx, New York 10461.
Purpose: To investigate the origins and course of development of individual differences in neonates.
Subjects: Normal, healthy, full-term babies, 2 to 5 days old, born at Bronx Municipal Hospital Center.
Methods: A neonatal behavioral profile, which was established in previous studies, will be used. The profile includes behavioral and heart rate ratings on excitation, soothing, feeding, sleep, and nonstimulus periods of observation. Neonates will be followed at ages 2 weeks, and 1, 2, 3, and 4 months to measure the stability of early appearing traits and their relation to later behaviors. Data will be analyzed with respect to stability of early appearing behaviors and the relationship between neonatal behavior and maternal and birth history.
Duration: 1966-continuing.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U.S. Department of Health, Education, and Welfare.
Publications: In Grant Newton and Seymour Levine (Eds.), *Early experience and behavior: Psychobiology of development.* Springfield, Illinois: Charles C. Thomas, 1968; *Psychosomatic Medicine*, 1966, 28, 316.

32-AA-6 LONGITUDINAL STUDY OF DENTOFACIAL SKELETAL, PHYSICAL GROWTH, AND NUTRITION OF CHILDREN

Investigator(s): Bhim S. Savara, D.M.D., M.S., Chairman, Child Study Clinic, Dental School, University of Oregon, Portland, Oregon 97201.
Purpose: To study the dentofacial growth of children, assessment and skeletal age related to facial growth, and variations in physique and its effect on dentofacial growth; and to determine heritable traits.
Subjects: 420 children, including 40 pairs of twins, ages 3 to 18. 300 children have been observed for more than 10 years.
Methods: Cephalograms, hand, wrist, and calf X-rays, intraoral X-rays, study casts, anthropometric measurements, and photographs are taken; and oral examinations are administered to the subjects. Children are examined every 6 months until they are 14 years old.
Duration: 1950-continuing.
Cooperating group(s): University of Oregon Dental School; National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare.

Publications: *Angle Orthodontist*, 1968, 38, 104-120; *American Journal of Orthodontics*, 1969, 55, 133-153; *American Journal of Physical Anthropology*, 1969, 30(2), 315-318; *Bulletin of the Academy of General Dentistry*, June 1969, 27-31; *Journal of Dentistry for Children*, November-December 1969, 1-4; *American Journal of Orthodontics*, 1970, 57(6), 561-572; *Journal of Dental Research*. 1970, 49(4), 885; *Advances in Oral Biology*. New York: Academic Press, Inc., 1970. Pp. 1-9; *Journal of the American Dental Association*, 1970, 81. 653-661; *Oral Health*, 1971, 61(10), 19-28; *American Journal of Orthodontics*, 1971, 59(5), 488-500; *Symposium on Close-Range Photogrammetry*. Urbana: University of Illinois, 1971. Pp. 365-369.

32-AA-7

NEW RADIOGRAPHIC STANDARDS OF REFERENCE FOR SKELETAL DEVELOPMENT OF CHILDREN AND STANDARDS IN PREPARATION

Investigator(s): S. Idell Pyle, Ph.D., Research Associate in Anatomy, School of Medicine, Case Western Reserve University, Cleveland, Ohio 44106; William W. Greulich, Ph.D., Research Biologist, National Institute of Child Health and Human Development, Bethesda, Maryland 20014; and staff of the National Center for Health Statistics involved in the National Health Survey, Public Health Service, U.S. Department of Health, Education, and Welfare, Washington, D.C. 20201.

Purpose: To develop radiographic standards of reference for skeletal development of children to provide a basis for identifying maturity levels of growing bones in the hands, elbows, shoulders, hips, knees, and feet of children and youths according to the shapes of the bone shadows in an X-ray film.

Subjects: Approximately 1,000 healthy individuals in Cleveland and Boston.

Methods: The bone shadows in an X-ray film display a modal rate of growth of each bone by illustrating regularly occurring osseous features which develop in series on the surface of the bone cortex as it calcifies. A reference standard consists of films arranged as a series to show sequential osseous features which are alike in males and females. It is an instrument for measuring the skeletal maturity level of children. Films of the subjects, covering the full span of growth from birth to adulthood, have been used to prepare standards. A standard of reference for joints in the upper extremity is in preparation, with the section on the hand and wrist showing the application of cardinal maturity indicators of individual bones to handwrist bones which are anomalous in the number of their bone growth centers. For published standards, see Publications below.

Cooperating group(s): Bolton-Brush Growth Study Center, Case Western Reserve University, Cleveland; Department of Maternal and Child Health, Harvard University School of Public Health, Boston; National Center for Health Statistics, Rockville, Maryland; Departments of Pediatrics and Endocrinology, Henry Ford Hospital, Detroit; Merrill-Palmer Institute, Detroit; Department of Education, Eastern Michigan University, Ypsilanti.

Publications: Greulich, W. W. and Pyle, S. I. *A radiographic atlas of skeletal development of the hand and wrist*. (2nd ed.) Stanford, California: Stanford University Press, 1959; Hoerr, N. L.; Pyle, S. I.; and Francis, C. C. *A radiographic atlas of skeletal development of the foot and ankle*. (1st ed.) Springfield, Illinois: Charles C. Thomas, 1962; Pyle, S. I. and Hoerr, N. L. *A standard of reference for the growing knee*. (2nd ed.) Springfield, Illinois: Charles C. Thomas, 1969; Pyle, S. I.; Waterhouse, A. M.; and Greulich, W. W. *A standard of reference for the growing hand and wrist*. (1st ed.) Cleveland: The Press of Case Western Reserve University, 1971.

32-AA-8 METHODS IN CHARACTER DEVELOPMENT

Investigator(s): Ernest M. Ligon, Ph.D., Director; and staff, Union College Character Research Project, 10 Nott Terrace, Schenectady, New York 12308.
Purpose: To develop more effective methods in character development in cooperation with families and character training agencies. (Character is defined in terms of three dimensions: philosophy of values, breadth of social vision, and strength of purpose.)
Subjects: Children and families throughout the United States. The families belong to churches, YMCAs, and schools but participate in the study as individual families.
Methods: Procedures of the research are based on action research, in which the participants cooperate with the laboratory and use methods of coscientist research. Open-ended reports on research goals constitute the basic body of research data. An analysis of these data serves as the basis for the development of new procedures and for the scientific reports that are published concerning it.
Findings: Reports have been prepared concerning hypotheses tested in the home and character building agencies. Most of the findings relate to the home, learning, decision making, and methods for character development, plus descriptions of age level potentials, especially for decision making.
Duration: 1935-continuing.
Cooperating group(s): Lilly Endowment, Inc.
Publications: Catalog: *Attitude Education and Character Development*, which lists 44 publications and includes a price list, is available from the investigator.

32-AA-9 LONGITUDINAL GROWTH STUDIES OF CHILDREN WITH CRANIOFACIAL BIRTH DEFECTS

Investigator(s): Samuel Pruzansky, D.D.S., Director, Center for Craniofacial Anomalies, Medical Center, University of Illinois, P.O. Box 6998, Chicago, Illinois 60680.
Purpose: To study the epidemiology, genetics, morphology, physiology, and postnatal development; and to plot the natural history of children with craniofacial birth defects.
Subjects: Over 3,000 subjects, males and females, from infancy to adulthood.
Methods: The subjects were initially studied as infants. Procedures included roentgenocephalometry, tomography, dental casts, and photographs. Speech and hearing, psychosocial, and pediatric evaluations supplied additional information.
Findings: Patterns of growth have been delineated that are useful in clinical management. Some conditions have been shown to get worse; some show spontaneous improvement; and others remain unchanged. Syndrome-specific cranial morphologies have been described and genetic significance has been described.
Cooperating group(s): Illinois State Pediatric Institute; Division of Services for Crippled Children, University of Illinois; Cook County Children's Hospital; Division of Research, Maternal and Child Health Services, National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare; National Institute of Dental Research, National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare.
Publications: *Cleft Palate Journal,* 1971, 8, 239. A list of articles in journals of dentistry, medicine, public health, speech and hearing, and psychology is available from the investigator.

32-AA-10 YOUTH REPORTS

Investigator(s): Cecelia E. Sudia, M.A., Research and Evaluation Division, Children's Bureau, Office of Child Development, U.S. Department of Health, Education, and Welfare, P.O. Box 1182, Washington, D.C. 20013.
Purpose: To collect and analyze opinions and values of high school age youths.
Subjects: 250 high school students.
Methods: Students were randomly chosen from youth enrolled in college preparatory courses in high schools selected to cover urban and suburban schools in each of 12 metropolitan areas in the United States. Each student was sent a set of short, open-ended questions and asked to report on the range of opinions in his school or neighborhood group. It is anticipated that the panel will be interviewed in this way two to three times a year. Replies are coded for content; analysis is both quantitative and qualitative.
Findings: The method of mail interview is successful with this group of students, and qualitative reports of opinion add considerable depth and range, as compared to typical polls of student opinions.
Duration: Spring 1969-continuing.
Publications: Teenagers discuss the "generation gap." *Youth Reports No. 1,* U.S. Department of Health, Education, and Welfare, 1969; Youth reporters discuss "problem drugs." *Youth Reports No. 2,* U.S. Department of Health, Education, and Welfare, 1970; Youth reporters discuss legal age restrictions. *Youth Reports No. 3,* U.S. Department of Health, Education, and Welfare, 1971.

32-AA-11 PHILADELPHIA CENTER FOR RESEARCH IN CHILD GROWTH

Investigator(s): Wilton M. Krogman, Ph.D., LL.D., Director, Philadelphia Center for Research in Child Growth; Geoffrey F. Walker, B.D.S., Director, Philadelphia Center for Craniofacial Biology, University of Pennsylvania, Philadelphia, Pennsylvania 19146; and Francis E. Johnston, Ph.D., Department of Anthropology, University of Texas, Austin, Texas 78712.
Purpose: To develop standards and norms of physical growth and development for normal, healthy children in Philadelphia.
Subjects: 300 white boys and 300 white girls; 250 black boys and 250 black girls; ages 6 to 17.
Methods: Cephalometry and somatometry are employed. Measurements are linear, transverse, sagittal, circumferential, skin thickness (via skin calipers), X-ray films of left hand (routinely) and of upper arm or lower leg (reduced number of cases); also of head and face in *norma laterales sinistra* and *norma faciales* (roentgenographic cephalometry). Dental models are taken. Histories secured are (1) familial in terms of ethnic background and socioeconomic status; (2) medical (illness) and dental (occlusion, dental stage, oral habits); and (3) genetic, in terms of the familial occurrence of trait(s) considered. All data may be referred to several age categories: (1) chronological age, (2) dental or eruptive age, and (3) skeletal or biological age. All data have been put on microfilm, coded, and stored in computer memory. (1) *School Series:* initially based on 600 normal, healthy, white 6- to 12-year old school children from five Philadelphia schools (ultimately followed to 22 schools). These children have provided the core data upon which the 7- to 17-year standards are based. (2) *Negro American Series:* based on the semiannual study of 500 elementary school children. These children have provided the core data upon which the 7- to 17-year standards are based. (3) *Orthodontic Series:* now numbers 2,700 children from the Orthodontic Clinics of the University of Pennsylvania (2,000) and the Children's Hospital (500). All of these children have been followed

through their treatment course (2 to 4 years, average). There are posttreatment follow-up studies on about 10 percent of them. (4) *Cleft Palate Series:* in cooperation with the Children's Hospital. These data are single preoperative roentgenographic cephalometric, plus selected somatometry. There are 600 such records and follow-up data on about 10 percent of these children. (5) *Cooley's Anemia Series:* based on 120 children. Measurements, X-ray films, familiogenetic histories were taken, and therapeutic treatment was given. (6) *Endocrine and Chromosomal Series:* Children seen on a referral basis from Children's Hospital.

Duration: 1949-1971.

Cooperating group(s): Children's Hospital of Philadelphia; Philadelphia Board of Education; School System, Archdiocese of Philadelphia; National Institute of Dental Research and National Institute of Child Health and Human Development, Public Health Service, U.S. Department of Health, Education, and Welfare.

Publications: *Monograph of the Society for Research in Child Development,* May 1970, 35(3, Serial No. 136).

32-AA-12 LONGITUDINAL GROWTH STUDY OF GUATEMALAN CHILDREN OF DIFFERENT RACIAL HISTORIES AND SOCIOECONOMIC BACKGROUNDS

Investigator(s): Francis E. Johnston, Ph.D., Professor, Department of Anthropology; Robert M. Malina, Ph.D., Associate Professor, University of Texas, Austin, Texas 78712; and Robert MacVean, Ed.D., Vice-Rector, Universidad del Valle de Guatemala; and Director, American School, Guatemala City, Guatemala.

Purpose: To study the interrelationships between growth measurements and performance measurements in a longitudinal sample of Guatemalan children of different genetic and socioeconomic backgrounds.

Subjects: Approximately 2,000 male and female students, ages 6 to 16, enrolled in two public and two private schools in Guatemala City are examined each year. Children are of Guatemalan, European, and North American backgrounds.

Methods: Subjects are examined each spring. Data gathered include anthropometric measurements, hand-wrist X-rays, results of intelligence and performance tests, and medical examination records. Cross-sectional and longitudinal analyses of data will be performed.

Duration: 1953-1975.

Cooperating group(s): American School, Guatemala City; Universidad del Valle de Guatemala; University of Texas, Austin.

32-AA-13 PROGNOSTIC VALUE OF NEONATAL BEHAVIORAL ASSESSMENTS

Investigator(s): Judy F. Rosenblith, Ph.D., Professor of Psychology, Wheaton College, Norton, Massachusetts 02766; and Associate Member, Institute of Life Sciences, Brown University, Box 1910, Providence, Rhode Island 02912.

Purpose: To determine if standardized behavioral assessment of newborns can be used to identify a population at risk to later neurologically based developmental dysfunction.

Subjects: Approximately 1,750 newborns, 1,550 of whom participate in the Providence Collaborative Perinatal Research Project.

Methods: The Rosenblith modification of the Graham Scale, a behavioral assessment, was used to determine the neurological, muscular, and sensory status of the newborns. Prognostic value of this scale is determined by relating it to criteria obtained in the follow-up assessments of the Collaborative Perinatal Research Project. Replications of the original study based on 400 infants total almost four. Data are now complete through the fourth year psychological examination.

Findings: Newborn measures are related to development at 8 months of age. Specific newborn signs are prognostic of later dysfunction: hypersensitivity to light is indicative of severe neurological damage; unusual patterns of muscle tonicity are related to varying degrees of developmental problems. The newborn assessments could be routinely adapted by hospitals: the equipment costs less than $10; the time required for assessment is less than a 1/2 hour; and the examination procedure can be taught to paraprofessional personnel.

Duration: January 1958-September 1975.

Cooperating group(s): Providence Lying-In Hospital; Child Development Study and Institute of Life Sciences, Brown University.

Publications: *Biologia Neonatorium*, 1970, 15, 217-228; *American Academy of Ophthalmology and Otolaryngology. Transactions*, 1970, 74, 1215-1228; Dubois-Poolsen, Lairy, and Remond (Eds.) La fonction du regard. *Colloque*, 1971, 215-224 (published by Institut National de la Sante et de la Recherche Medicale, Paris).

32-AA-14 COLLABORATIVE STUDIES IN CEREBRAL PALSY AND OTHER NEUROLOGICAL AND SENSORY DISORDERS OF INFANCY AND CHILDHOOD

Investigator(s): Heinz W. Berendes, M.D., National Institute of Neurological Diseases and Stroke, National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare, Bethesda, Maryland 20014.

Purpose: To investigate factors and conditions that affect parents: (1) conditions of pregnancy; e.g., infections, trauma, bleeding, drugs, and progress of labor; (2) environmental factors that influence the mother; e.g., social and economic conditions, emotional stress, and medical care; (3) biological factors in parents; e.g., age, parity, medical and reproductive history, and immunologic characteristics; and (4) the genetic background of the parents. To investigate in the offspring: disorders of the nervous system at the time of delivery or disorders that appear during infancy or early childhood, including cerebral palsy, mental subnormality, and behavioral disorders.

Subjects: Approximately 8,000 live births a year from collaborating institutions for 6 years. Offspring are followed until 8 years of age.

Methods: A detailed investigation of the independent variables will be directed towards the reevaluation of the effect of factors already suspected, clarification of the way in which these factors are operative, and the discovery of new factors. Information, from women studied during pregnancy and from their offspring throughout infancy and early childhood, will be collected and analyzed in a uniform way in a number of medical centers throughout the country. Intensive study is made of a limited number of cases; less intensive studies are conducted for as many damaged children and abnormal pregnancies as possible.

Duration: 1956-continuing.

Cooperating group(s): Charity Hospital, New Orleans, Louisiana; Johns Hopkins University, School of Medicine, Baltimore, Maryland; Boston Lying-In Hospital, Children's Medical Center, and Harvard University (Warren Anatomical Museum), Boston, Massachusetts; University of Minnesota Medical School, Minneapolis, Minnesota; Columbia-Presbyterian

Medical Center, New York, New York; Children's Hospital of Buffalo, Buffalo, New York; University of Oregon Medical School, Portland, Oregon; Children's Hospital of Philadelphia and Pennsylvania Hospital, Philadelphia, Pennsylvania; Brown University, Providence, Rhode Island; University of Tennessee Medical School, Memphis, Tennessee; Medical College of Virginia, Richmond, Virginia.
Publications: Chipman, S.S.; Lilienfeld, A.M.; and Donnelly, J.F. (Eds.) *Research methodology and needs in perinatal studies.* Springfield, Illinois: Charles C. Thomas, 1966. Chapters 5 and 6. A bibliography is available from the investigator.

32-AA-15 STUDY OF PERSONALITY ORIENTED DEVELOPMENT BY THE TWIN INTRAPAIR COMPARISON METHOD

Investigator(s): William Pollin, M.D., Chief; Donald Cohen, M.D., Clinical Associate; and Eleanor Dibble, Research Social Worker, Section on Twin and Sibling Studies, Adult Psychiatry Branch, National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U.S. Department of Health, Education, and Welfare, Bethesda, Maryland 20014.
Purpose: To understand the contributions of genetic, constitutional, and environmental factors to social, emotional, and cognitive development during the first years of life; specifically, to explicate the factors that underlie the emergence of individuality, using twins and triplets as subjects.
Subjects: Twins and triplets, from the prenatal period through elementary school age.
Methods: The central methodological principle emphasizes the effort to define precisely developmental difference within infant and childhood MZ twin pairs, and then search for the determinants of such differences. In the longitudinal study, parents are interviewed as soon as the diagnosis of a twin pregnancy is made. Neurological, pediatric, and developmental assessments are performed at birth and at 3- to 6-month intervals during the first years of life. The parents are interviewed at the same intervals about the children's development and family history. In the preschool period, the children receive standardized psychological testing, are observed in a standardized nursery school setting, and are administered projective psychological testing. Children and families are visited at home and also seen in structured office settings. In cross-sectional studies, children are seen for developmental evaluation, psychological assessment, and observations of free play, and their parents are interviewed. The value of questionnaire techniques is being investigated. A general research question relates to the way in which constitutional differences in the children elicit different types of parenting, and the ways in which differential parental behavior shapes the emergence of personality differences in the children.
Duration: 1967-1980..

32-AA-16 PREVENTIVELY ORIENTED SCHOOL MENTAL HEALTH PROGRAMS

Investigator(s): Emory L. Cowen, Ph.D., Professor, Department of Psychology, and Director; D. A. Dorr, Ph.D., Research Coordinator; L. D. Izzo, M.A., Chief Psychologist; and M.A. Trost, M.A., Chief Social Worker, Primary Mental Health Project, University of Rochester, River Campus Station, Rochester, New York 14627.
Purpose: To detect and prevent school maladaptation.
Subjects: 7,500 school children including 4,500 primary children in 11 preventively oriented school mental health programs.

Methods: Current research which originated in 1958 (see *Research Relating to Children,* Study 19-SS-7), includes 23 studies on training nonprofessionals, evaluation of programs, process analyses, selection-process relations, selection-outcome relations, and process-outcome relations. Between 20 and 30 different research instruments and assessment procedures are being used.
Duration: February 1969-continuing.
Cooperating group(s): University of Rochester.

32-AA-17 LANGUAGE ACQUISITION IN THE CONTEXT OF THE DEVELOPMENT OF BEHAVIOR AND INTERACTION

Investigator(s): Margaret Bullowa, M.D., Researcher, Speech Communication Group, Research Laboratory of Electronics, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139.
Purpose: To find the steps by which early stages of the child's language development take place.
Subjects: Four firstborn children from white, English-speaking, middle class families.
Methods: Each child was observed from birth for at least 30 months at home at weekly intervals. On each visit a half hour continuous record was made on tape and film. An observer using a shielded microphone dictated a simultaneous description of ongoing behavior and interaction to supplement the film taken by a robot camera. A timing signal was placed on the tape and film every 5 seconds. (The tape and film from an observation may be synchronized during playback in the laboratory.) In addition, an independent team that consisted of a pediatrician and a developmental psychologist visited each baby's home once a month to assess other aspects of maturation and development. Indexes to sound and transcripts were made from the tapes to permit rapid search. Tapes are analyzed by linguists interested in phonological, semantic and syntactic features. Synchronized tape and film is studied by linguists and by the principal investigator, who is interested in the communicative behavior of which the vocalization forms a part.
Findings: The most significant finding is the apparent obligatory relationship between the child's vocal sound production and actions with the same meaning in early *performative sentences.* Such sentences are used by the child to communicate messages when he is showing something to someone, when he is greeting someone, etc. Another finding is the spontaneous appearance of sentences with topic-comment construction in the child's speech even though parents rarely use this construction. (The construction is not characteristic of adult American English.)
Duration: Pilot study, 1959-1965; present study, 1965-continuing.
Cooperating group(s): National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare.
Publications: *Journal of Child Psychiatry,* 1964, III(1), 53; *Monographs of the Society for Research in Child Development,* 1964, 29(1), 101-114; *Language and Speech,* 1964, 7(2), 107-111; *Quarterly Progress Report of the Research Laboratory of Electronics,* 1966, 81, 181-186; *Lingua,* 1967, 19(1), 1-59; *Foundations of Language,* 1967, 1, 37-65; Reibel, D. A. and Schane, S. A. (Eds.) *Modern studies in English.* Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1969. Pp. 422-447; Bar-Adon, A. and Leopold, W. F. (Eds.) *Child language: A book of readings.* Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1971; *Journal of the American Academy of Child Psychiatry,* 1971, 10(1), 124-135; *Quarterly Progress Report of the Research Laboratory of Electronics,* M.I.T., 1971, No. 100.

32-AA-18 THE HARVARD PRESCHOOL PROJECT

Investigator(s): Burton L. White, Ph.D., Director; Jean Watts, Ph.D., Co-director; and Barbara Kaban, M.A., The Harvard Preschool Project, Laboratory of Human Development, Graduate School of Education, Harvard University, 418 Larsen Hall, Appian Way, Cambridge, Massachusetts 02138.

Purpose: To trace the development of educability and competence in children during the first 6 years of life, and simultaneously to trace the role of experience in such development.

Subjects: Presently, 32 normal children, ages 12 to 32 months, of both sexes, half of whom were selected because they exhibited potentials to develop high degrees of general competence during the second and third years of life; while the other children seemed likely to develop a considerably lower level of competence.

Methods: The work in progress constitutes a longitudinal natural experiment. Data are collected by home observation and testing of the children on the average of 2 hours per week. One observational technique consists of tape recordings in which the observer describes the child's activities. The data are then coded onto forms using instruments developed for the project. Another technique involves a checklist record of behavior. Tests of language and cognitive development are administered regularly. Factors, including stream of experience, the child's competencies, and salient environmental influences, are measured.

Findings: Analysis of preliminary data indicates that the observation instruments are monitoring the development of competence in promising ways. Further indications of how childrearing practices influence the process are becoming clear. The mother or substitute, usually through indirect action, is seen as the major environmental influence on the development of competence. A longitudinal experiment will be initiated this year. (See *Research Relating to Children, Bulletin 22,* May-December 1967, Study 22-DA-3, p. 16.)

Duration: September 1965-continuing.

Cooperating group(s): U. S. Office of Economic Opportunity; Carnegie Corporation, New York; Head Start, Office of Child Development, U. S. Department of Health, Education, and Welfare.

32-AA-19 LEARNING OF INCENTIVE VALUE IN CHILDREN

Investigator(s): Jum C. Nunnally, Ph.D., Professor, Department of Psychology, Vanderbilt University, Nashville, Tennessee 37203.

Purpose: To study the learning of incentive value in children through the use of reward conditioning.

Subjects: Elementary school children, ages 7 to 11.

Methods: Neutral objects (usually nonsense syllables) are associated with receipt of reward, nonreward, and loss of reward in various types of research designs. The amounts and kinds of condition reward value are measured in relation to verbal evaluation, reward expectancy, choice behavior, and measures of selective attention.

Findings: Various consistent effects have been found on the dependent measures, and the research paradigms have been able to differentiate many treatment conditions concerned with secondary rewards.

Duration: 1963-continuing.

Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.

Publications: Rileigh, K. K. and Nunnally, J. C. A new measure of semantic appraisal for studies of secondary rewards. *Psychonomic Science,* 1970, 18, 203-205; Wilson, W. H. and Nunnally, J. C. A naturalistic investigation of acquired meaning in children. *Psychonomic Science,* 1971, 23, 149-150.

32-AA-20 COLLABORATIVE PERINATAL RESEARCH PROJECT

Investigator(s): John A. Anderson, M.D., Ph.D., Professor and Head, Department of Pediatrics; and Robert O. Fisch, M.D., Project Director, Child Development Study, University of Minnesota, Box 487 Mayo Memorial, Minneapolis, Minnesota 55455.
Purpose: To develop public health measures for the prevention of pregnancy wastage and damaged children.
Subjects: Approximately 3,000 pregnant women and their newborns who will be followed from birth to age 8.
Methods: The following data will be collected from early pregnancy onward for the mother and child: history, physical examination, laboratory findings, labor and delivery, newborn observations, nursing, pediatric-neurological examinations, 4-month pediatric evaluation, 3-year speech and hearing examination, 4-year psychological examination, 7-year pediatric-neurological and psychological examination, and 8-year speech, language, and hearing examination.
Duration: January 1958-July 1974.
Cooperating group(s): National Institute of Neurological Diseases and Stroke, National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare; Boston Lying-In Hospital; Brown University, Providence; Charity Hospital, New Orleans; University of Buffalo; Children's Hospital, Phildalephia; Children's Medical Center, Boston; Columbia University, New York; Johns Hopkins University, Baltimore; Medical College, University of Virginia, Charlottesville; New York Medical College, New York; Pennsylvania Hospital, Philadelphia; University of Oregon Medical School, Portland; University of Tennessee College of Medicine, Memphis.
Publications: Results will be available from Dr. Joseph S. Drage, Acting Chief, Perinatal Research Branch, National Institutes of Health, Bethesda, Maryland 20014.

32-AA-21 CHILDHOOD PSYCHOSIS

Investigator(s): Rudolf Ekstein, Ph.D., Director, Childhood Psychosis Project; Seymour W. Friedman, M.D., Director, Clinical Services; Peter Landres, M.D., Staff Psychiatrist; Beatrice M. Cooper, M.A., Senior Research Social Worker; and Joel Liebowitz, Ph.D., Clinical Research Psychologist, Reiss-Davis Child Study Center, 9760 West Pico Boulevard, Los Angeles, California 90035.
Purpose: To develop better diagnostic and treatment methods for childhood psychosis; and to investigate psychoanalytic methods of treatment, the use of support systems, and work with parents, collaborating agencies, schools, and hospitals.
Subjects: 10 children, ages 5 to 20.
Methods: Data were gathered through tape recordings of psychotherapy sessions, therapists' summaries of sessions, and repeated psychological tests. The use of *distance* as a psychological mechanism will be investigated. (See *Research Relating to Children, Bulletin 18*, 1964, 58; and *Bulletin 20*, 1966, 72.)
Duration: 1957-continuing.
Publications: *Children of time and space, of action and impulse*. New York: Appleton-Century-Crofts, 1966; *The challenge: Despair and hope in the conquest of inner space*. New York: Brunner/Mazel, 1971; Ekstein, R. and Friedman, S. W. Do you have faith that I'll make it? *Reiss-Davis Clinic Bulletin*, 1971, 8(2); Rubin, K. The flawed hammer. *Reiss-Davis Clinic Bulletin*, 1971 8(2); Cooper, B. The flawed triangle. *Reiss-Davis Clinic Bulletin*, 1971, 8(2); Liebowitz, J. M. Transformation of the flaw — Reevaluation via psychological testing. *Reiss-Davis Clinic Bulletin*, 1971, 8(2); Ekstein, R. and Wax, D. Fusion and diffusion of memory and perception in childhood psychosis in relation to psychotherapeutic innovations. *Reiss-Davis Clinic Bulletin*, 1972, 9(2); Ekstein, R. Friedman, S.; and Caruth, E. The psychoanalytic treatment of childhood schizophrenia. In B. B. Wolman (Ed.) *Manual of child psychopathology*. New York: McGraw Hill, 1972. Pp. 1035-1057.

GROWTH AND DEVELOPMENT

General

32-BA-1 NATIONAL CHILD DEVELOPMENT STUDY

Investigator(s): Ronald Davie, Ph.D., Director of Research, National Children's Bureau, Adam House, 1 Fitzroy Square, London, England W1P 5AH.
Purpose: To study the education, behavior, health, and environment of a group of British children from birth to maturity.
Subjects: Every child in England, Scotland, and Wales born in one week of March, 1958.
Methods: Specially designed, precoded forms were used. At each follow-up, educational tests were administered, a behavioral scale was completed, a complete medical examination was given, and the mothers were interviewed.
Duration: March 1958-continuing.
Cooperating group(s): Social Science Research Council.
Publications: A complete list of references is available from the investigator.

32-BA-2 CHILD'S LIFE AT HOME DURING INFANCY AND PRESCHOOL AGE

Investigator(s): Pramila Phatak, Ph.D., Reader; and Ranjan Shah, M.A., Research Associate, Department of Child Development, Faculty of Home Science, University of Baroda, Baroda, Gujarat, India.
Purpose: To collect data on various aspects of the child's life in the areas of feeding, toilet training, sleeping, bathing, play, communication, and maternal handling.
Subjects: 57 boys and 31 girls, ages 5 months to 5 1/2 years, primarily from upper middle class families; and their mothers.
Methods: Mothers of the children were interviewed longitudinally at 3-month intervals until the children were 26 months old, and at 6-month intervals after the children reached 2 1/2 years until they were 5 1/2 years old. An interview schedule was used to provide a tentative classificatory system for the mothers' responses. Data were also collected on family background. Data were studied in terms of the mothers' responses in the various areas of development.
Duration: November 1966-December 1973.
Cooperating group(s): Ford Foundation.
Publications: Results of the study are available from the investigators.

32-BA-3 INFANT STIMULATION: POTENTIAL INTERVENTION IN HIGH RISK FAMILIES

Investigator(s): John H. Meier, Ph.D., Director; and Richard R. Knight, Ph.D., Research Associate, John F. Kennedy Child Development Center, University of Colorado Medical Center, 4200 East Ninth Avenue, Denver, Colorado 80220.

Purpose: To determine the effects of an infant stimulation program upon infant state, parent-infant interaction, and infant development level.
Subjects: 30 to 40 Anglo, Black, and Chicano boys and girls, ages 3 to 9 months, from middle and lower class families, some of whom are normally developing and some of whom are disabled.
Methods: Infants and parents will be observed for short periods (1 to 2 hours) and long periods (4 to 6 weeks), both with and without stimulation modules. Each subject will act as his own control. Data will be collected through videotapes which will be subsequently analyzed for infant behaviors (activity, exploration, or habituation) and infant-parent interaction. Parent attitude inventories will be administered.
Duration: September 1972-June 1973.

32-BA-4 DEVELOPMENT OF AN INFANT IN A GERM-FREE ENVIRONMENT

Investigator(s): David A. Freedman, M.D., Professor, Department of Psychiatry, College of Medicine, Baylor University, Houston, Texas 77025.
Purpose: To study the development of an infant with an immune globulin deficiency who is being maintained in a germ-free environment.
Subjects: One male child with an immune globulin deficiency.
Methods: Longitudinal observations were made of the child, and comparisons will be made to established norms for his age. (Editor's Note: Study of the child had lasted 13 months in October 1972 when this report was received from the investigator.)
Findings: Precocious motor development was found in the child, but delayed development was found in the infant's speech. A great deal of stereotyped rhythmic behavior was observed, object relations were found to be impoverished, while a good range of affect was observed.
Duration: September 1971-continuing.

Physical

32-CC-1 VAN CAMP AUDITORY DISCRIMINATION TEST

Investigator(s): Sarah S. Van Camp, Ed.D., Assistant Professor, Department of Child Development, University of Delaware, Newark, Delaware 19711.
Purpose: To identify kindergartners and first graders who have auditory discrimination problems, and to prescribe remedial reading instruction for them.
Subjects: 250 elementary school children: 145 boys and 106 girls, ages 5 to 13. The sample consists of 161 white children and 89 Black children. They attend either an all-Black inner city, a blue collar, or a middle class suburban elementary school. There are four groups of children in each school: kindergartners, first graders, a learning disability group, and a random matched group.
Methods: The Van Camp Auditory Discrimination Test consists of a series of 15 sets of electronically produced sounds based on the Morse Code and played on a casette with recorded instructions. The test is administered individually, and the child responds nonverbally to the question, "Are these sets of sounds the same?" The test has four sample questions, progressing from two sets of sounds in each stimuli to four sets. Five scores

are obtained: "same" responses, "different" responses, same correct, different correct, and total correct. Data on eye and hand dominance were collected, and each child was asked to draw a picture of himself.

Findings: Scores varied as a function of age. The highest mean number correct was from a randomly selected group matched on age and sex to a learning disability group. The mean score for all three schools on the total correct was approximately the same, which suggests that auditory discrimination is not dependent on race or socioeconomic level. Cross-dominance was slightly higher in the Black school.

Duration: February 1972-May 1973.

Cooperating group(s): Faculty Research Fund, University of Delaware; Department of Public Education, Newark, Delaware; Department of Public Education, Wilmington, Delaware; Department of Public Education, Marshallton-McKean, Delaware.

32-CC-2 AMBLYOPIA AND STRABISMUS TREATMENT

Investigator(s): Merrill J. Allen, O.D., Ph.D., Division of Optometry, University of Indiana, Bloomington, Indiana 47401.

Purpose: To evaluate nonsurgical methods of treating children with in-turned or out-turned eyes.

Subjects: 68 patients, ages 1 to 46, who had esotropia or exotropia ranging from 2 to 70 prism diopters. There were 30 exotropes and 42 esotropes. One third of the group had previous surgery, 38 percent had anomalous retinal correspondence, and 58 percent were female.

Methods: The patients were treated with a combination of spectacles, occluders, eye-hand coordination apparatus, and a new home trainer which uses flashing lights. A record of the number of hours of exposure to treatment was kept and the patients were evaluated at weekly intervals. The approach was judged by comparison with successes reported in the literature for surgical and nonsurgical procedures. The treatment stopped at the end of the school year and not when cures or failures were apparent.

Findings: The technique is more effective in restoring normal vision than surgery and approximates the best nonsurgical procedures reported in the literature. The overall success rate in straightening eyes was 60 percent, with 44 percent of the subjects obtaining normal binocular vision in an average of 4.6 months.

Duration: September 1970-June 1974.

Publications: Allen, M. J. Strabismus clinic progress report. *Journal of American Optometry Association*, 1971, 42, 367.

32-CC-3 GENETIC ENVIRONMENTAL FACTORS IN THE DEVELOPMENT OF VISUAL REFRACTIVE CHARACTERISTICS

Investigator(s): Francis A. Young, Ph.D., Professor and Director; and George A. Leary, F.S.M.C., Primate Research Center, Washington State University, Pullman, Washington 99163.

Purpose: To evaluate the contribution of genetics and various environmental factors in the development of visual refractive characteristics of Eskimo and Indian children.

Subjects: Approximately 200 Warm Springs Indian children and their parents, ages 5 to 70, equally divided by sex; and approximately 1,200 Eskimo children and their parents, ages 5 to 80, equally divided by sex.

Methods: The parents and children in both groups were given a complete visual examination measuring refractive characteristics and the optical components of the eyes by means of phakometry and ultrasonography on a longitudinal basis. Measures were taken to determine the effects of lighting conditions, reading, diet, and genetics on the development of refractive characteristics. The Indian population will serve as a partial control group with the Eskimo group in terms of lighting conditions and reading behavior.

Findings: Results indicate that genetics play little or no role in the development of normal and myopic refractive characteristics in either group. Lighting conditions and reading behavior appear to play a major role in the development of refractive characteristics, and diet appears to play a very minor role in the development of these characteristics.

Duration: 1968-1982.

Cooperating group(s): National Eye Institute, National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare; The Eskimo Council, Barrow, Alaska; Warm Springs Indian Council, Warm Springs, Oregon.

Publications: Leary, G. A.; Goo, F. J.; Johnson, C.; Baldwin, W. R.; West, D. C.; Box, R. A.; and Harris, E. Refractive errors, reading performance and school achievement among Eskimo children. *American Journal of Optometry and Archives of the American Academy of Optometry*, 1970, 47(5), 384-390; Leary, G. A. and Farrer, D. N. Comparative oculometry of Caucasians, Eskimos and chimpanzees. In J. Bock and K. Ossoinig (Eds.), *Ultrasono graphia medica.* Wien, Austria: Wiener Medizinischen Akademie, 1971; Leary, G. A.; Baldwin, W. R.; West, D. C.; Box, R. A; Harris, E.; and Johnson, C. Comparison of cycloplegic and non-cycloplegic refraction of Eskimos. *American Journal of Optometry and Archives of the American Academy of Optometry*, 1971, 48(10), 814-825.

32-CD-1 STIMULUS CONTROL OF NEONATAL SLEEP-WAKEFULNESS BEHAVIORS

Investigator(s): James D. Boismier, Ph.D., Assistant Professor, Nebraska Psychiatric Institute, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Nebraska 68105.

Purpose: To demonstrate stimulus control of sleep-wakefulness behaviors in newborn infants.

Subjects: 16 male and 16 female normal infants, approximately 30 hours old, born of young mothers who had no complications of pregnancy or delivery nor excessive obstetric medication.

Methods: Subjects were assigned randomly to one of four visual stimulus conditions. Pre- and postprandial measures of wakefulness and rapid eye movement sleep defined by behavior state criteria were obtained. Data were analyzed by orthogonal comparison and multiple regression to test hypotheses of stimulus effects, schedule effects, sex, and sex by stimulus condition effects. Hypotheses concerning the homegeneity of regression across experimental conditions between the measures of wakefulness and rapid eye movement sleep were also examined.

Findings: Measures of wakefulness and rapid eye movement sleep vary in relation to stimulus, schedule, and subject variables; either criterion can be increased or decreased. Waking visual behavior and subsequent rapid eye movement sleep are inversely related. Males and females were found to respond differently to patterned visual stimulation.

Duration: September 1971-June 1972.

Cooperating group(s): George Peabody College for Teachers, Nashville, Tennessee; Nashville General Hospital, Nashville, Tennessee.

32-CE-1 NUTRITION IN SCHOOL CHILDREN

Investigator(s): W. W. Holland, M.D., M.R.C.P., F.F.C.M., Director; Judith Cook, Lecturer; and Douglas Altman, Lecturer, School of Medicine, St. Thomas' Hospital, London, England S.E. 1.
Purpose: To compare the nutritional values of the diets of school children from different social classes and family structures, and to analyze trends in height and weight of children from different social environments.
Subjects: Approximately 800 boys and girls, ages 11 to 14, from different socioeconomic backgrounds.
Methods: The sample of children was stratified by social class, family size, and the weight of all children within the prescribed age range in four social areas.
Duration: 1967-continuing.
Cooperating group(s): Kent County Council Health Department, England.
Publications: Influence of environmental factors on height and weight of school children. *British Journal of Preventive Social Medicine*, 1970, 24, 154; Measurement of nutritional intake among school children. *British Journal of Preventive Social Medicine*, 1972, 26, 106.

32-CE-2 NUTRITION AND CHILD GROWTH AND DEVELOPMENT IN TUNISIA

Investigator(s): Harben Boutourline-Young, M.D., Yale Tunis Project, 8-10 Rue Nigeria, Tunis, Tunisia, Africa; Bechir Hamza, M.D., Director, National Institute of Child Health, Tunis, Tunisia, Africa; and Z. Kallal, Director, National Institute of Nutrition and Food Technology, Tunis, Tunisia, Africa.
Purpose: To study the nutritional status and growth and development of children in Tunisia.
Subjects: 533 children from poverty stricken urban families who recently emigrated from the countryside in Tunisia, Africa.
Methods: Neurological, sociological, psychological, anthropometric, and socioeconomic data were collected on the children. Data were also collected on mother-child interactions and the mothers' personalities. The Bayley Scales of Infant Development were administered to the young children.
Findings: Significant differences were found between the *best fed* group and the control group on motor development (.05). Nonsignificant differences were found between the same groups on physical growth.
Duration: 1971-1974.
Cooperating group(s): National Institute of Child Health and Human Development, National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare; The Grant Foundation, New York; Swedish International Development Authority; Peace Corps; UNICEF; School of Medicine, Yale University.

32-CE-3 THE CAUSES OF FAILURE TO THRIVE IN LEBANON

Investigator(s): Donald S. McLaren, M.D., Ph.D., Professor, Department of Clinical Nutrition; and Director, Nutrition Research Program, School of Medicine, American University of Beirut, Beirut, Lebanon.
Purpose: To study the causes of children's failure to thrive in Lebanon.
Subjects: Approximately 200 preschool children in Lebanon from lower socioeconomic groups.
Methods: In addition to a socioeconomic questionnaire, the children were tested on

the Stanford-Binet Intelligence Scale and anthropometric measurements were taken.
Findings: The level of the parents' education was found to be an important factor in determining the child's failure to thrive.
Duration: 1967-1974.
Publications: Kanawati, A. A.; McLaren, D. S.; and Abu-Jawdeh, I. Failure to thrive in Lebanon. I. Experience with some simple somatic measurements. *Acta Paediatrica Scandinavica*, 1971, 24, 154-156; Kanawati, A. A. and McLaren, D. S. Socioeconomic factors in the aetiology of "failure to thrive" in Lebanon. *Proceedings of the Thirteenth International Congress on Pediatrics*, Vienna, 1971. Pp. 341-347.

32-CF-1 PREVENTION OF DENTAL CARIES IN A COMMUNITY

Investigator(s): R. A. Bagramian, D.D.S., Dr. P.H., Chairman, Department of Community Dentistry, School of Dentistry, University of Michigan, Ann Arbor, Michigan 48104.
Purpose: To demonstrate that dental caries can be prevented by using several preventive methods in combination over a 3-year period.
Subjects: 1,220 children in grades 1 and 6.
Methods: Half of the students will receive all measures considered to be ideal preventive care (e.g., flouride treatments, plastic sealant applied to teeth, and complete dental care). The other half of the children will receive dental health education instruction.
Duration: January 1973-June 1976.
Cooperating group(s): National Institute of Dental Research, National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare.

32-CF-2 DENTAL BEHAVIOR IN A POPULATION OF SCHOOL CHILDREN

Investigator(s): R. A. Bagramian, D.D.S., Dr. P.H., Chairman, Department of Community Dentistry, School of Dentistry, University of Michigan, Ann Arbor, Michigan 48104; and J. J. Samuels, Ed.D., Assistant Professor, Division of Health Ecology, School of Dentistry, University of Minnesota, Minneapolis, Minnesota 55455.
Purpose: To study the total environment of dental care including etiological factors and steps taken by parents to prevent or correct problems.
Subjects: 1,000 children in grade 3 from three socioeconomic groups.
Methods: Epidemiological data were collected from interviews with the children. Questionnaires were mailed to parents, and personal interviews were held with a selected subsample. The children were given an oral examination each year.
Findings: No relationship was found between sucrose intake and dental caries prevalence in children. Poor quality dental restorations were found to be significant and not necessarily related to socioeconomic status as represented by income or education.
Duration: 1970-continuing.
Cooperating group(s): Public Health Service, U. S. Department of Health, Education, and Welfare.

32-CF-3 EVALUATION OF A COMBINED PROGRAM OF SCHOOL WATER FLUORIDATION AND MOUTHRINSING WITH SODIUM FLUORIDE FOR THE CONTROL OF DENTAL CARIES

Investigator(s): Olga G. Joly, D.D.S., Sc.D., Health Scientist Administrator, Community Programs Section, Caries Prevention and Research Branch, National Caries Program, National Institute of Dental Research, National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare, Bethesda, Maryland 20014; and George von Mohr, D.D.S., M.S.V., M.P.H., Dental Regional Consultant for Eastern North Carolina, North Carolina State Board of Health, Fayetteville, North Carolina.

Purpose: To control dental caries by school water fluoridation and weekly mouthrinsing with a 0.2% solution of sodium fluoride, and to determine the long-term benefits of the program on children.

Subjects: Approximately 2,000 children, grades 1 through 12, equally divided among Blacks, American Indians, and whites. The children attend schools in Robeson County, North Carolina.

Methods: The DMF tooth and surface index will be used to quantify dental caries prevalence. Baseline pretreatment scores on all enrolled school children will be compared with the scores obtained every 2 years until the completion of the program. Comparisons will be made by type of tooth and type of surface in order to relate the child's age and the number of years of his exposure to the program.

Duration: 1972-1984.

32-CF-4 EVALUATION OF A COMBINATION OF SELF-ADMINISTERED MEASURES OF FLUORIDE EXPOSURE FOR THE CONTROL OF DENTAL CARIES IN A NONFLUORIDE AREA

Investigator(s): Herschel S. Horowitz, D.D.S., M.P.H., Chief; and Stanley B. Heifetz, D.D.S., M.P.H., Senior Field Investigator, Community Programs Section, Caries Prevention and Research Branch, National Caries Program, National Institute of Dental Research, National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare, Bethesda, Maryland 20014.

Purpose: To determine the inhibitory effect of various preventive procedures on dental caries.

Subjects: Approximately 1,350 children in grades 1 through 6 enrolled in all nine elementary schools in Nelson County, Virginia, who are participating in the program; and a sample of junior and senior high school students in the same county. (Nelson County has approximately 2 1/2 times as many white residents as Black residents.)

Methods: The preventive procedures employed with the elementary school students included (1) the daily administration in school of an acidulated phosphate-fluoride tablet (1 mg. fluoride), (2) weekly rinsing in school with a sodium fluoride mouthwash (0.1% fluoride), (3) the distribution of toothbrushes and dentifrice (0.1% fluoride) for home use, and (4) periodic lectures and training on the proper care of teeth and sound dietary practices in school. Baseline examinations were conducted of the entire elementary school population, a 60 percent sample of junior high school students, and a 75 percent sample of senior high school students. Follow-up examinations will be carried out twice annually for 11 years and will be compared with the baseline data.

Duration: September 1972-October 1983.

32-CF-5 CHILD HEALTH BENEFITS FROM DAILY PLAQUE CONTROL

Investigator(s): Victor Mercer, D.D.S., M.S.D., Project Director; Charles Smith, D.D.S., M.P.H., Project Coordinator; and Jack Mollenkopf, D.D.S., Project Examiner, Division of Dental Health, Indiana State Board of Health, 1330 West Michigan Street, Indianapolis, Indiana 46206.

Purpose: To determine the benefit of a plaque control approach to improve the dental health of a school population.

Subjects: 1,000 children in grades 4, 5, and 6.
Methods: The children were divided into control and experimental groups. Initial and annual dental examinations were made. Plaque control was carried out in the classroom.
Duration: September 1972-September 1975.
Cooperating group(s): Indiana University; Putnam County Schools, Indiana.

32-CG-1 EFFECTS OF A PERCEPTUAL-MOTOR PROGRAM FOR PRESCHOOLERS ON PERCEPTUAL-MOTOR DEVELOPMENT, SELF-CONCEPT, AND ACADEMIC READINESS

Investigator(s): Brad S. Chissom, Ed.D., Assistant Professor; Jerry R. Thomas, Ed.D., Associate Professor; and Charlene Stewart, M.A., Instructor, School of Education, Georgia Southern College, Statesboro, Georgia 30458.
Purpose: To study the effects of a perceptual-motor program for preschoolers on their perceptual-motor development, self-concept, and academic readiness.
Subjects: 40 preschool children, equally divided by sex, who attend the Georgia Southern College Laboratory School. The sample reflects the socioeconomic and racial characteristics of the local community.
Methods: The children are divided into experimental and control groups. The experimental group will receive a planned program of perceptual-motor activities over a 5-month period. Data on the child's balance, motor coordination, academic aptitude, and self-concept will be collected before, during, and after this 5-month period.
Duration: January 1973-June 1973.
Cooperating group(s): Georgia Southern College Faculty Research Fund; Marvin Pittman Laboratory School.

32-CH-1 EFFECTS OF RATE-ALTERED SPEECH UPON COMPREHENSION BY NORMAL, MENTALLY RETARDED, AND LANGUAGE DISORDERED CHILDREN

Investigator(s): Robert L. McCroskey, Ph.D., Professor; and Nickola W. Thompson, M.A., Instructor, Department of Logopedics, Wichita State University, Wichita, Kansas 67208.
Purpose: To determine if there exists an optimal rate at which spoken information can be conveyed to children with various communicative problems in order to maximize their comprehension and facilitate language learning.
Subjects: 20 normal children in grade 1, ages 6-4 to 7-4; 23 mentally retarded children, ages 7-3 to 13-5; and 15 children with language disorders, ages 5-1 to 10-3.
Methods: Fifty simple-active-affirmative-declarative sentences were recorded, randomized, and electronically altered with respect to rate (Electro Rate Changer). Five rates were used: two rates faster than normal, one normal, and two slower than normal. The children selected a picture from a multiple choice slide to indicate their comprehension. Both parametric and nonparametric statistics were used in the data analysis.
Findings: The analyses suggested that (1) the rate of speaking does not affect normal grade 1 children, (2) grade 1 children with reading disorders are influenced by rate of speech, (3) speech rate has a positive influence on comprehension by mentally retarded children, and (4) rate of speech has a positive effect on comprehension by children with learning disorders.
Duration: January 1972-June 1973.
Cooperating group(s): Institute of Logopedics, Wichita, Kansas; Starkey Developmental

Center for the Mentally Retarded, Wichita, Kansas; Wichita Public School System, Wichita, Kansas.

32-CH-2 EVERYDAY PRESCHOOL INTERPERSONAL SPEECH USAGE: DEVELOPMENTAL AND SOCIOLINGUISTIC STUDIES

Investigator(s): Frances F. Schachter, Ph.D., Assistant Professor, Department of Psychology, Barnard College, Columbia University, New York, New York 10027; Bonnie Klips, B.A., Research Assistant; Kathryn Kirshner, M.A.; and Martha Fredricks, M.A., Research Assistant, Bank Street College, 610 West 112th Street, New York, New York 10025.
Purpose: To study speech development in children, ages 2 to 5, in terms of the uses or functions of speech for interpersonal communication; and to compare the speech development of advantaged and disadvantaged Negro and Caucasian children.
Subjects: Cross-sectional sample: 160 children in four groups: advantaged white, advantaged Black, disadvantaged Black children with high IQ, and disadvantaged Black children with low IQ. Subgroups consisted of children ages 2 1/2, 3 1/2, 4 1/2, and 5 1/2. Longitudinal sample: Four children observed at ages 2, 2 1/2, 3, 3 1/2, and 4 1/2.
Methods: Twelve 3-minute samples of spontaneous interpersonal speech were collected on each child at each age level during self-initiated free play periods in preschool settings. Utterances were scored according to nine major categories of interpersonal speech: expressive, desire implementing, possession rights implementing, ego enhancing, self-referring, joining, collaborative, learning implementing, and reporting.
Findings: Prior to age 3, speech consists mainly of desire implementing, self-referring, learning implementing, and reporting about the self and things, with the adult listener predominating. After age 3, ego enhancing, boasting, and denigrating statements abruptly increase, and a group of peer addressed speech patterns increase with age. A third form of speech begins at age 4 or 5: modulations, justifications, rationalizations, disagreeing in a collaborative discourse, and competitive self-referring statements. Among children with above average IQ, the advantaged children scored consistently higher than disadvantaged Blacks in modulations. Compared to disadvantaged Blacks below average in IQ, this group scored consistently higher in asserting desires, speaking to adults, asserting desires to adults, and modulations.
Duration: 1970-1973.
Cooperating group(s): Office of Economic Opportunity.

32-CH-3 SPONTANEOUS SPEECH IN YOUNG CHILDREN

Investigator(s): Victor Lotter, Ph.D., Assistant Professor, Department of Psychology, University of Guelph, Guelph, Ontario, Canada.
Purpose: To conduct a naturalistic, longitudinal exploratory investigation of dialogue among siblings.
Subjects: Two pairs of preschool siblings, a girl-girl pair and a girl-boy pair (separated in age by about 13 months), who were studied from the time the younger sibling in each pair was 3 years old.
Methods: Presleep tape recordings are being made of the siblings' dialogue over a long period of time.
Duration: 1969-continuing.
Cooperating group(s): Canada Council.

32-CH-4 TRAINING SPEECH CLINICIANS IN THE RECORDING AND ANALYSIS OF ARTICULATORY BEHAVIOR

Investigator(s): William M. Diedrich, Ph.D., Professor, Department of Hearing and Speech, Medical Center, University of Kansas, Kansas City, Kansas 66103.
Purpose: To train speech clinicians in the recording and analysis of articulatory behavior.
Subjects: Approximately 600 boys and girls with articulation deficits, in grades 1 to 6, who are normal in other respects.
Methods: Several groups of children received different types of treatment and accountability procedures.
Findings: Counting and charting appear to be useful accountability procedures for the speech clinician.
Duration: June 1969-August 1974.
Cooperating group(s): Special Projects, Division of Training, Bureau for Handicapped, Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: 16 mm. color film: *Counting charting target phonemes in conversation.* Lawrence, Kansas: Audiovisual Service, University of Kansas.

32-CH-5 PROGRAMMED STUTTERING THERAPY FOR CHILDREN

Investigator(s): Bruce Ryan, Ph.D.; Burl Gray, Ph.D.; and Barbara Van Kirk, M.A., Research Associate, Behavioral Sciences Institute, 969 Pacific, Monterey, California 93940.
Purpose: To compare the effectiveness of four different programs which attempt to establish fluent speech in children who stutter.
Subjects: 40 boys and girls who stutter, ages 7 to 18.
Methods: The research will take place in public school settings, and different clinicians will be assigned to different programs. Samples of the subjects' speech in the home, school, and therapy settings will be collected and analyzed. Verbal output, stuttered words, and the time of the therapy will be measured and compared across the different programs and speaking settings.
Duration: September 1972-August 1974.
Cooperating group(s): Bureau of Research, Office of Education, U. S. Department of Health, Education, and Welfare; Monterey Peninsula Unified School District.

32-CH-6 OCCURRENCE OF CHILDREN'S ECHOIC RESPONSES ACCORDING TO INTERLOCUTORY QUESTION TYPES

Investigator(s): Warren H. Fay, Ph.D., Associate Professor, Department of Speech Pathology, Crippled Children's Division, Medical School, University of Oregon, Portland, Oregon 97201.
Purpose: To determine if some types of adult questions are more likely than other types to trigger echoic responses from children.
Subjects: 22 highly echoic children: 15 boys and 7 girls, ages 35 to 41 months (mean age: 35.95 months). The 15 white and 7 Black children have IQs ranging from 53 to 109 (mean IQ: 83.6).
Methods: Tape recorded interviews of the children were analyzed. A total of 1,509 questions from 22 dialogues were analyzed according to a system developed by E. Leach and described in Interrogation: A model and some implications. *Journal of Speech and Hearing Disorders*, 1972, 37, 33-46. Each question was then classified according to whether an echoic response followed immediately.

Findings: Differences among probe types were found to be highly significant (.001) using the chi-square technique. Locative questions ("Where do you sleep?") triggered echoic responses at nearly twice the rate of the other two main constraint classes: confirmatory ("Do you like hamburgers?"), and nominal ("What is this?").
Duration: November 1972-February 1973.
Cooperating group(s): National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Fay, W. H. Childhood echolalia: A group study of late abatement. *Folia Phoniatrica*, 1967, 19, 297-306.

Intellectual

32-DB-1 ERRORS AND PERSONALITIES: THEIR ROLE IN COGNITION

Investigator(s): Susan Ann Rose, Ph.D., Instructor; and Marion Sue Blank, Ph.D., Associate Professor, Albert Einstein College of Medicine, Yeshiva University, 1300 Morris Park Avenue, Bronx, New York, New York 10461.
Purpose: To analyze the relative strengths and weaknesses in the cognitive processes of hyperactive and withdrawn children, to describe the changes in the patterning of cognitive processes at different ages, and to determine the relationships that exist between IQ and performance on cognitive tests.
Subjects: Approximately 300 children, with approximately 100 from each of three age groups (3, 4, and 5 years).
Methods: Sex of the child and his socioeconomic level will be systematically varied. The children will be administered (1) the Stanford-Binet Intelligence Scale, (2) a test to analyze the different patterns of cognitive functioning, and (3) a behavioral scale for rating the child's personality. The behavioral scale includes measures of skills in (1) cognitively directed perception, (2) concepts and the process of verbal coding, (3) problem solving, and (4) spatial representation. The test is comprised of 240 items which are distributed into four 1/2-hour separate testing sessions. Each child is rated on the personality scale in each of the four cognitive testing sessions. A classroom rating will be based on a 15-minute observation period.
Duration: March 1972-fall 1974.
Cooperating group(s): National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

32-DC-1 EFFECTING SITUATIONAL AND MODALITY GENERALIZATION THROUGH PORTABLE STIMULUS CONTROLS

Investigator(s): John T. Neisworth, Ph.D., Associate Professor; David P. Kurtz, Ph.D., Assistant Professor; and Sara J. Forsberg, M.Ed., Instructor, S-24, College of Human Development, Pennsylvania State University, University Park, Pennsylvania 16802.
Purpose: To explore a technique used to maintain desirable behavior changes in extratraining environments, including the classroom, playgrounds, and the home.
Subjects: Various groups of children: children, ages 3 to 5, in a preschool setting; elementary school age children; and educable mentally retarded children in a special class.

Methods: As positive behavior changes are arranged in specially designed environments, the new constructive behaviors are brought under the control of contrived and exaggerated cues. These cues, which are portable and extrinsic to the teacher, may be incorporated into other situations to increase the psychological similarity of the new situations. Gradually, the cue is faded and control is maintained by the features of the new situation. This may provide a simple procedure to enhance response generalization.
Findings: Initial pilot studies suggest the feasibility of this method to increase both generalization across different situations and from verbal to nonverbal behavior.
Duration: October 1972-June 1973.
Cooperating group(s): Special Education Laboratory School, Pennsylvania State University.
Publications: Initial results are available from the investigators.

32-DC-2 DEMOGRAPHIC FACTORS IN THE LEARNING DISABILITIES OF MILITARY DEPENDENT CHILDREN

Investigator(s): F. William Black, Ph.D., Assistant Chief, Psychology Service, Fitzsimons General Hospital, Denver, Colorado 80240.
Purpose: To investigate the factors which appear to be of some significance in the learning problems of elementary school children referred for psychological evaluation.
Subjects: 100 elementary school, military dependent children, ages 6 to 12, who have learning disabilities and have been referred for psychological evaluation.
Methods: A descriptive demographic study will be conducted, and achievement and academic data will be collected. Data will be analyzed through correlation statistics.
Duration: October 1972-January 1973.
Cooperating group(s): Clinical Research Committee, Fitzsimons General Hospital.

32-DC-3 ACADEMIC ACHIEVEMENT OF HIGH AND LOW PERCEIVING CHILDREN

Investigator(s): F. William Black, Ph.D., Assistant Chief, Psychology Service, Fitzsimons General Hospital, Denver, Colorado 80240.
Purpose: To compare the academic performance of matched samples of high and low perceiving elementary school children.
Subjects: Matched samples of 30 high and 30 low perceiving elementary school children who were referred for psychological evaluation because of learning problems.
Methods: The high and the low perceiving learning disabled children will be matched on the basis of age, sex, IQ, and school grade. Comparisons will be made on achievement variables through analysis of variance.
Findings: The mean achievement performance of the low perceiver sample is significantly higher than that of the high perceiver sample in both reading and spelling.
Duration: August 1972-October 1972.
Cooperating group(s): Clinical Research Committee, Fitzsimons General Hospital.

32-DC-4 A DEVELOPMENTAL STUDY OF MONETARY INCENTIVE LEVEL INFLUENCE ON OVERT REHEARSAL AND FREE RECALL OF UNRELATED WORDS

Investigator(s): Anthony J. Cuvo, Ph.D., Psychologist, Mansfield Training School, Mansfield Depot, Connecticut 06251.

Purpose: To determine if monetary incentive influences the overt rehearsal of words to be learned and their free recall.
Subjects: 40 children in grade 5, 40 children in grade 8, and 40 college students. Each group is equally divided by sex.
Methods: The subjects rehearsed the words either overtly or minimally and were given either no incentive or an incentive of one cent or 10 cents for each word recalled. Data were analyzed through analysis of variance.
Findings: The subjects were found to rehearse and recall words with a 10 cents incentive more frequently than words with a one cent incentive when permitted to rehearse overtly. The incentive level appeared to have no effect on recall when rehearsal was blocked.
Duration: September 1971-January 1973.
Cooperating group(s): Willington Public Schools, Connecticut; Stafford Springs Public Schools, Connecticut.

32-DC-5 VISUAL-AUDITORY PAIRED-ASSOCIATE LEARNING IN NORMAL, RETARDED, AND LEARNING DISABLED CHILDREN

Investigator(s): Gerald Groden, Ph.D., Child Psychologist; and Leesa H. Mann, B.A., Psychological Assistant, Child Development Center, Rhode Island Hospital, Providence, Rhode Island 02903.
Purpose: To investigate the component skills involved in higher order cognitive functioning as measured by standardized cognitive tests, and to help describe the basic variables underlying specific and generalized academic achievement variables.
Subjects: 73 children: 23 girls and 50 boys, ages 5 to 16, from lower socioeconomic backgrounds, with IQs ranging from 45 to 125. The children are patients at the Child Development Center of the Rhode Island Hospital.
Methods: The children are presented with eight meaningless symbols in sequence on a programmer, and each symbol is paired with a taped one-syllable verbal stimulus familiar to and made by most children by age 2. The child is given one practice trial and nine test trials in which to learn the stimuli. The pairs are presented in random order. Two scores are obtained: one indicates how nearly the subject approached a criterion of two consecutive errorless trials, and the other measures the number of correct responses out of a possible 72. Correlation coefficients were performed, which relate Wechsler Intelligence Scale for Children or Stanford-Binet Intelligence Scale scores to paired-associate learning skill and standard scores on the reading section of the Wide Range Achievement Test.
Findings: Results suggest that paired-associate learning (visual-auditory) and measured intelligence are highly related. The paired-associate task in combination with the standard intelligence test was found to provide increased power in predicting academic learning problems.
Duration: January 1970-continuing.
Publications: Results are available from the investigators.

32-DC-6 TRANSFER FROM A CLASSICALLY CONDITIONED TO AN INSTRUMENTALLY LEARNED RESPONSE

Investigator(s): Thomas L. Whitman, Ph.D., Assistant Professor; and Susan I. Taub, Ph.D., Assistant Professor, Department of Psychology, University of Notre Dame, Notre Dame, Indiana 46556.

Purpose: To investigate the effects of several classical conditioning manipulations upon the performance of young children in an instrumental discrimination learning situation.

Subjects: 129 boys and girls, ages 4 to 8, attending either nursery school or grade 1 in schools in Indiana.

Methods: Four separate experiments were conducted. In the first experiment, 20 first graders were assigned to one of two groups, each of which was given an identical instrumental discrimination learning problem. Stimuli were presented successively. Responses to one stimulus (an orange light) were always followed by a candy reinforcement, while responses to a second stimulus (a green light) were never rewarded. Prior to the instrumental learning situation, half of the children received classical conditioning pairings of the two light stimuli to their respective reinforcements. The other group of children were exposed to both stimuli without any reinforcements. In the second experiment, 29 grade 1 children followed essentially the same procedures as in the first experiment, but a penalty condition was introduced to reduce the child's tendency to maximize the probability of reinforcement by responding regardless of which stimulus was present. This was accomplished by informing all children that they would be penalized one piece of candy for an inaccurate response. In a third experiment an inhibition group was added to assess the effect of classically associating a candy reinforcer with a cue that was later to be designated as incorrect in the instrumental test situation. In this experiment, 46 first graders were divided into two experimental groups and one control group. A fourth experiment was conducted to examine the possibility that the classical pairing of the reinforcer with the incorrect cue brought the color dimension to the attention of the children in the inhibition group. Nursery school children (N=34) were assigned to one of the three groups to determine whether younger children would benefit from the classical conditioning procedure and would perform similarly to the older children in the third experiment. The trials to criterion, errors of omission and commission, and total error scores were recorded for each child.

Findings: The acquisition of an instrumental response to a stimulus for a positive reinforcer in a successive discrimination task situation is facilitated if the same stimulus has been previously classically paired with a positive reinforcer. The classical association of a reinforcer with a cue facilitates the later acquisition of a differential instrumental response to another cue of the same dimension. The results suggest that traditional operant methods for teaching children discriminations may be augmented by first systematically associating, within a classical conditioning paradigm, cues to be later discriminated and differentially responded to with positive reinforcement.

Duration: January 1971-completed.

Publications: Copies of the report are available from the investigators.

32-DC-7 SCREENING FOR EARLY IDENTIFICATION OF LEARNING DISABILITIES

Investigator(s): Janine P. Coury, Ph.D., Psychologist, Pupil Services Project, Memphis City Schools, Memphis Board of Education, 2597 Avery Avenue, Memphis, Tennessee 38122; and Donald B. Nessa, M.A., Gailor Mental Health Clinic, University of Tennessee, Memphis, Tennessee 38103.

Purpose: To facilitate placement procedures for special education students, and to provide diagnostic information for teachers.

Subjects: 354 first graders in Title I schools. The first phase of the study included all Black children.

Methods: The Metropolitan Readiness Test (MRT) was administered in large groups; the Slosson Drawing Condition Test (SDCT) was administered in small groups; and the Wepman Auditory Discrimination Test (WADT), the Wechsler Intelligence Scale for

Children (WISC), and the Frostig Test of Visual Perception (FTVP) were administered individually to the children. One group of students was diagnosed by the WADT and the SDCT and was compared to a randomly selected nondiagnosed group. Both groups were rated by teachers on a specially constructed scale. Data were analyzed by analysis of variance.
Findings: The screening battery agreed with teacher ratings in 86 percent of the cases, and the WISC and the FTVP agreed with the ratings in 86 percent of the cases. The screening battery yielded 82 percent of the diagnostic WISC and FTVP protocols.
Duration: Fall 1972-completed.

32-DC-8 THE VIGILANCE TASK: A METHOD FOR EVALUATING ATTENTION DEFICITS

Investigator(s): Robert P. Anderson, Ph.D., Professor; and Charles Halcomb, Ph.D., Professor, Department of Psychology, Texas Technological University, Lubbock, Texas 79409.
Purpose: To explore attention deficits in children with learning disabilities, and to evaluate the vigilance task as a means of investigating hyperkinesis and/or distractibility.
Subjects: 30 boys, ages 8 to 11, who have learning disabilities and attend special education classes; and 30 normal boys matched for age.
Methods: The children were evaluated individually. A vigilance task was developed in which the subject observed a series of flashing lights with 900 flashes in a 30-minute period in a red-red and green-green sequence. The child was told to respond by pressing a button when the red-green combination occurred. The number of correct detections and false alarms were the two dependent variables used. The entire procedure was controlled by a digital computer.
Findings: The learning disabled boys differed from the normal boys on both variables at a highly significant level.
Duration: January 1972-June 1973.
Cooperating group(s): Institute of Human Resources, Texas Technological University.

32-DD-1 DEVELOPMENT OF A BLACK INTELLIGENCE TEST

Investigator(s): Robert L. Williams, Ph.D., Professor, Department of Psychology, Washington University, Lindell and Skinker Boulevards, St. Louis, Missouri 63130.
Purpose: To develop a culture-specific intelligence test for Black children and to compare it to standard intelligence tests.
Subjects: 495 Black children, ages 5 to 18.
Methods: The Black Intelligence Test of Cultural Homogeneity (BITCH) is being used to moderate the validity of other standard IQ tests. Nonstandard test instructions are being developed for standard group tests (e.g., Boehm Test of Basic Concepts).
Findings: Black children were found to do much better on the BITCH than on the California Achievement Tests. Black children did better on the nonstandard than on the standard version of the Boehm Test of Basic Concepts.
Duration: October 1971-October 1973.

32-DD-2 THE DEVELOPMENTAL PROFILE

Investigator(s): Gerald D. Alpern, Ph.D., Director of Research, Child Psychiatry Services, School of Medicine, Indiana University, Indianapolis, Indiana 46202; and Thomas J.

Boll, Ph.D., Research Assistant Professor, Child Development and Mental Retardation Center, University of Washington, Seattle, Washington 98105.

Purpose: To provide a developmental screening instrument that would evaluate children from birth to preadolescence without bias as a function of sex, race, or socioeconomic status.

Subjects: 3,008 normal, Negro and Caucasian boys and girls, from three social classes.

Methods: The inventory consists of 217 items in five scales: physical, self-help, social, academic, and communication. An IQ equivalent score may be derived from the instrument. After the inventory had been developed over a 3-year period, a version existed that was considered ready for standardization. The standardization version was administered only to subjects who passed a preinterview questionnaire designed to screen out children with any reasonable chance of suffering any developmental delay. The data were then subjected to an item analysis to eliminate items that had low validity or contained bias. Validity and reliability studies were conducted.

Findings: All findings of the standardization study and the various reliability and validity studies indicate that the instrument is a useful tool for the multidimensional screening of children.

Duration: June 1970-July 1972.

Cooperating group(s): Marion County Association for Retarded Children, Indiana.

Publications: Copies of a manual describing the instrument are available from: Psychological Development Publications, 7150 Lakeside Drive, Indianapolis, Indiana 46278.

Note: This study originally was published in *Research Relating to Children, Bulletin 31.* The subject population cited in Study 31-DD-3 (300 children) is incorrect. The correct population is 3,008 children. We extend apologies to the investigators.

32-DE-1 CONCEPTS OF DEATH IN YOUNG CHILDREN

Investigator(s): Catherine Hunerberg, Ph.D., Chairman; and Ruth Formanek, Ph.D., Professor, Department of Elementary Education, Hofstra University, Hempstead, New York 11550; and Margot Tallmer, Ph.D., Professor, School of Education, Hunter College, New York, New York 10021.

Purpose: To study young children's concepts of death.

Subjects: Approximately 500 boys and girls, ages 3 to 9, from middle lower class urban and suburban backgrounds.

Methods: An interviewer administered the Piagetian Concept of Life Questionnaire and an original questionnaire on the concept of death to the children. Responses were categorized according to stages of causal thinking proposed by Piaget. The cognitive component of children's notions of death will be compared to other precausal ideas (e.g., concept of life, movement of clouds, etc.).

Findings: Stages are being discovered that parallel those of other similar concepts — but without social class differences. The presence of an overriding defense mechanism is hypothesized.

Duration: 1972-1974.

Publications: Paper presented at the meeting of the American Association of Suicidology, Detroit, February 1972.

32-DE-2 MEASUREMENT OF PIAGET'S LOGICAL OPERATIONS

Investigator(s): Ronald Raven, Ed.D., Professor, Department of Instruction, Faculty of Educational Studies, State University of New York at Buffalo, Buffalo, New York 14214.

Purpose: To assess learning difficulties using Piaget's logical operations as a model for concept learning.
Subjects: 400 public school students, ages 8 to 17.
Methods: Raven's Test of Logical Operations was administered to groups of subjects.
Duration: August 1972-August 1974.

32-DG-1 THE RELATIONSHIP OF PERCEPTUAL SKILLS TO READING ABILITY

Investigator(s): W. W. Grant, M.D., Director; Anne E. Bell, M.A., Psychologist; M. E. Robinson, M.A., Psychologist; and L. B. Schwartz, M.A., Psychologist, Child Development Clinic, Children's Hospital of Winnipeg, 685 Bannatyne Avenue, Winnipeg, Manitoba R3EOW1, Canada.
Purpose: To investigate the extent to which maturational lags in visual and visual-motor development, evident at the preschool level, could be resolved by grade 3; and to study the relationship between sensory and motor abilities to reading ability.
Subjects: 64 children at the end of third grade, 41 of whom at the preschool level had a significant lag in visual-perceptual and /or visual-motor development; and 23 children selected in preschool who did not evince these deficits.
Methods: At the end of grade 3, the two groups were administered the Hooper Visual-Organization Test, Closure Test, Bender Gestalt Test, Frostig Test, Purdue Survey, Schonell Word Recognition Scale, and a neurological and electroencephalographic examination. The mean scores of the 41 high risk children were compared to those of the control group by means of a t-test.
Findings: Results suggest that a deficit in visual-perceptual and/or visual-motor ability will persist in many children at least to age 8 or 9. No significant difference was found between the two groups in reading ability.
Duration: July 1964-continuing.
Cooperating group(s): Departments of Occupational Therapy and EEG, the Children's Hospital of Winnipeg; St. Boniface School Board.
Publications: Copies of the study are available from the investigators.

32-DG-2 THE ORIGIN AND DEVELOPMENT OF IMITATION IN THE FIRST 6 MONTHS OF LIFE

Investigator(s): Olga Maratos, Lic. es Sci., Behaviour Development Research Unit, 310 Edgware Road, London W2, England.
Purpose: To describe the earliest stages of the development of imitation through three different sensory modalities: visual, auditory, and kinesthetic.
Subjects: 12 firstborn girls who were visited in their homes biweekly between the ages of 1 and 6 months.
Methods: Direct observations were made. Infants' spontaneous behavior was observed for a control period of 10 minutes prior to testing for imitation. Each test was administered three times to each infant, varying the order in three subgroups. The first test for each was in a different sensory modality. Behavior categories recorded were the same in both control and testing periods. Some sessions were recorded on videotape.
Findings: Imitation of certain models has been observed from the first month of life, usually with characteristic deformations of the model during the earlier phase. Rhythm appears to be the earliest aspect to be imitated in response to a moving model. Tongue protrusion is imitated prominently at 1 month and at 1 1/2 months. After 2 months, there does not seem to be imitation of tongue protrusion.
Duration: January 1971-June 1973.

32-DG-3 PERCEPTUAL SKILLS CURRICULUM

Investigator(s): Jerome Rosner, O.D., Research Associate, Learning Research and Development Center, 160 North Craig Street, Pittsburgh, Pennsylvania 15213.

Purpose: To identify perceptual skills that are directly related to classroom performance, and to design and validate methods that can be implemented by training these skills.

Subjects: Approximately 1,000 children, ages preschool through grade 3.

Methods: Controlled studies were conducted in which some students in a classroom were trained while others were not. Data will be analyzed by multivariate analysis.

Findings: Visual-motor skills relate more directly to arithmetic, while auditory skills relate to reading. These skills can be trained. Transfer effects from the training are evident from achievement data.

Duration: January 1969-January 1973.

Cooperating group(s): Office of Education, U. S Department of Health, Education, and Welfare; Ford Foundation.

Publications: The following papers are available from: Information Services, Learning Research and Development Center, 160 North Craig Street, Pittsburgh, Pennsylvania 15213: Rosner, J. and Simon, D. P. *The auditory analysis test: An initial report.* 22 pp. ($0.50 - Order No. 1971/3); Rosner, J. *The design board program.* 23 pp. ($0.50 - Order No. 1971/7); Rosner, J. Perceptual skills — A concern of the classroom teacher? *The Reading Teacher*, 1971, 24(6), 543-549. ($0.50 - Order No. 1971/10); Rosner, J. Application of the IPI model to a perceptual development curriculum. In J. I. Arena (Ed.), *Meeting total needs of learning-disabled children: A forward look. Proceedings of the 7th Annual International Conference of the Association for Children with Learning Disabilities.* San Rafael, California: Academic Therapy Publications, 1971. Pp. 95-107. ($0.50 - Order No. 1971/12); Rosner, J. *Phonic analysis training and beginning reading skills.* 8 pp. ($0.50 - Order No. 1971/19); Rosner, J. *The visual analysis test: An initial report.* 21 pp. ($0.50 - Order No. 1971/22); *The development and validation of an individualized perceptual skills curriculum.* 113 pp. ($1.50 - Order No. 1972/7).

32-DH-1 COGNITIVE CONTENT OF MOTHER-CHILD INTERACTIONS

Investigator(s): Alfred L. Baldwin, Ph.D., Professor; and Clara P. Baldwin, Ph.D., Senior Research Associate and Lecturer, Center for Research in Education, Cornell University, 274 Uris Hall, Ithaca, New York 14850.

Purpose: To study the content of language interactions of mothers and their children, and to develop methods for analyzing these interactions.

Subjects: 174 Black and Caucasian boys, ages 2 1/2 to 5, from upper and lower class backgrounds; and their mothers.

Methods: Verbal interactions of mothers and children are recorded on audiotape, transcribed, and coded by a category system called the Verbal Information Exchange and the Frank and Osser Measure of Syntactic Complexity. During the verbal interactions, a running record was dictated by an observer.

Findings: A mean of 666 utterances per half hour were approximately equally divided between mother and child. The amount of interaction decreases with age of the child, and syntactic complexity increases with age of the child, for both mothers and children. A striking difference was noted in the language complexity that the mother used when talking to an adult interviewer compared to the language she used with her child. The data do not support the language deprivation hypothesis.

Duration: 1964-1972.

Cooperating group(s): Project Literacy, Office of Education, U. S. Department of

Health, Education, and Welfare; National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

Publications: Baldwin, A. L. *et al. Cognitive content of mother-child interactions.* Final report, OE Project No. 6-1341. Order ED No. 041 996 from LEASCO Information Products, Inc., ERIC Document Reproduction Service, P. O. Box Drawer O, Bethesda, Maryland 20014. Xerox reproduction of report, $9.87; microfiche, $0.65.

32-DH-2 LANGUAGE GROWTH IN HEAD START CHILDREN THROUGH VERBAL INTERACTION WITH MOTHERS TRAINED IN A PRESCRIBED LANGUAGE PROCESS

Investigator(s): Carol Vukelich, Ph.D., Assistant Professor, College of Education, University of Delaware, Newark, Delaware 19711.

Purpose: To develop a language process to improve (1) the detrimental characteristics of the lower class mother's communication style and, (2) the language acquisition and development of disadvantaged children; and to investigate the effectiveness of lower class mothers' use of the prescribed language process to enhance their preschool children's linguistic development.

Subjects: 34 disadvantaged children, ages 3 and 4, attending Head Start programs in Southern Illinois.

Methods: The Peabody Picture Vocabulary Test (PPVT) and five subtests of the Illinois Test of Psycholinguistic Abilities (ITPA) were used to measure and compare the mean gains made by the children. Pretest scores were obtained for all children in two Head Start centers. The children were divided into three treatment groups: Group 1 consisted of children whose mothers agreed to participate in an 8-week training program and to use the language process daily with their children; Group 2 children received spontaneous daily individual attention from college students; Group 3 children received no special attention outside the Head Start program. Children in one Head Start center were randomly assigned to Groups 2 and 3, while children in a second Head Start center, whose mothers agreed to participate in the special program, made up Group 1. Immediately following an 8-week treatment period, posttest scores were obtained for all children who remained in the Head Start program. Pre- and posttest data were analyzed by analysis of covariance.

Findings: The mean gain of Group 1 was significantly and consistently greater than that of Group 2 on the PPVT and on three of the ITPA subtests (visual-motor association, verbal expression, and auditory association), and nonsignificantly greater on the remaining subtests (visual reception and auditory reception). The mean gain of Group 1 was significantly greater than that of Group 3 on one of the ITPA subtests (visual-motor association). Significant mean gain differences between the groups were not observed on the PPVT, nor on ITPA subtests of verbal expression, auditory association, and auditory reception, visual reception association, and visual reception. The mean gains of Group 1 were greater than that of Group 3 on the PPVT and on the ITPA subtests of verbal expression, auditory association, and auditory reception.

Duration: January 1971-May 1972.

Cooperating group(s): Head Start centers in Cartersville and Murphysboro, Illinois; Southern Illinois University, Carbondale, Illinois.

32-DH-3 EARLY LANGUAGE ASSESSMENT SCALE

Investigator(s): Alice S. Honig, M.A., Program Supervisor; and J. Ronald Lally, Ed.D., Director, Syracuse University Family Development Research Program, 100 Walnut Place, Syracuse University, Syracuse, New York 13210.

Purpose: To determine if a day care program for infants which emphasizes language facilitation can improve the decoding and communication skills of disadvantaged infants.

Subjects: Disadvantaged infants, ages 6, 12, 18, 24, and 30 months, who are enrolled in the Syracuse University Children's Center; and infants, ages 12, 18, and 30 months, from low income and from high education cross-sectional contrast groups.

Methods: Toys, facial expressions, social games, masks, tones, questions, verbal models for imitation, and pictorial materials are used to elicit vocal and verbal responses and appropriate gestural responses from the infants. The groups enrolled in the day care program will be compared to the control groups.

Findings: While the scores of the three groups were not found to differ initially; by the age of 30 months, the infants enrolled in the enrichment program were achieving scores closer to the high education infants and showed scores above those of the low income control infants.

Duration: 1970-1975.

32-DH-4 BIOLOGICAL VERSUS ENVIRONMENTAL INFLUENCES ON LANGUAGE IMITATIONS

Investigator(s): Merlin J. Mecham, Ph.D., Professor, Department of Speech Pathology, University of Utah, 1201 Behavioral Science Building, Salt Lake City, Utah 84112.

Purpose: To determine the effects of biological artifacts compared to the effects of environmental artifacts in terms of their relative influences on the imitation of specifically selected language units.

Subjects: 10 brain damaged children (biological artifact) and 10 bilingual Spanish-speaking children (environmental artifact). Each child had a mental age of 5, had a memory span of four to five digits, and had language ability comparable to expectations for his mental age.

Methods: Twenty English sentences representing universal structure and 20 representing transformational (cultural specific) structure were presented to the subjects for imitation. Error scores were analyzed to compare the two groups.

Findings: Results indicate that the biological artifact subjects did poorly on both sets of sentences with no sign of difference in the number of errors on the two sets. The environmental artifact subjects did significantly more poorly on the transformational than on the universal sentences, and they made significantly fewer errors on both sets than did the brain damaged subjects.

Duration: 1972-1974.

Cooperating group(s): Utah State Training School.

Publications: Copies of the study are available from the investigator.

32-DH-5 PRELINGUAL VOCAL COMMUNICATION AND INFANT DEVELOPMENT

Investigator(s): Taghi Modarressi, M.D., Acting Director; and Duncan McCulloch, E.E., Research Assistant, Division of Child Psychiatry, Institute of Psychiatry and Human Behavior, 645 West Redwood Street, Baltimore, Maryland 21201.

Purpose: To determine if one can differentiate the infant's vocalization on the basis of his particular psychobiological stress, and to better understand the communications system between mother and child.

Subjects: 22 normal, male and female infants, ages 1 to 5 days.
Methods: Samples are collected of infants' vocalizations under five cycles of psychobiological states related to birth, pain, hunger, deprivation, and disappearance of the mother.
Findings: Results indicate that one can differentiate the crying related to the five-cycle psychobiological states.
Duration: July 1971-July 1974.

32-DH-6 PRESCHOOL LANGUAGE DEVELOPMENT CENTERS

Investigator(s): Frances Stevens, Ed.D., Program Evaluator, Las Cruces Public Schools, 301 West Amador Avenue, Las Cruces, New Mexico 88001.
Purpose: To provide a language development program for children from educationally deprived environments.
Subjects: Approximately 1,000 children, age 5, the majority of whom are Chicanos. 1970-1971 Study: 260 children; 1971-1972 Study: 350 children; 1972-1973 Study: 371 children.
Methods: The instructional program includes language acquisition and development and uses an experimental approach to learning. In 1970-1971, tests administered to the children on a pre-post basis included the Peabody Picture Vocabulary Test (PPVT) and the Kindergarten Evaluation of Learning Potential (KELP). On the PPVT pretest, 208 children measured 4 years M.A.; and on the posttest, 5 years 4 months M.A. On the KELP, according to continual evaluations maintained for 186 students, the percentages of students functioning at each level were: Level I (Association): Low, 5 percent; Average, 39 percent; High, 55 percent. Level II (Conceptualization): Low, 25 percent; Average, 44 percent; High, 30 percent. Level III (Creativity): Low, 33 percent; Average, 37 percent; High, 28 percent. In 1971-1972, according to KELP evaluations maintained for 257 students, percentages were: Level I: Low, 3 percent; Average, 38 percent; High, 60 percent. Level II: Low, 14 percent; Average, 40 percent; High, 46 percent. Level III: Low, 12 percent; Average, 33 percent; High, 55 percent. On the Southwestern Cooperative Educational Laboratories Test of Oral English Language Production (SWCEL), 98 students were pretested; 78, posttested. Mean scores were 98 on the pretest and 138 on the posttest. A score below 151 was considered to indicate the student was not a competent speaker of English and might profit from participating in a language development program. On the pretest, 93 students scored below 151; 49 scored below 151 on the posttest. In 1972-1973, for 371 students a pre-post evaluation will be obtained using the SWCEL. A continual evaluation of each student's functional level will be maintained using the KELP. The evaluation of the project is reported to the New Mexico State Department of Education at the completion of each school year.
Duration: September 1970-continuing.
Cooperating group(s): Title I, Elementary/Secondary Education Act.

32-DH-7 DEVELOPMENT OF PSYCHOLINGUISTIC ABILITIES

Investigator(s): Bobby L. Stephenson, Ph.D., Assistant Professor, Department of Psychology, Northeast Louisiana State University, Monroe, Louisiana 71201; and Janet Brown, Examiner, Shreveport Mental Health Center, Shreveport, Louisiana.
Purpose: To conduct a 2-year follow-up of second grade children from four socioeconomic levels tested on the Illinois Test of Psycholinguistic Abilities.
Subjects: 80 fourth graders of average ability from four socioeconomic levels.

Methods: Comparisons were made of the 1970 and 1972 scores of the children on the Illinois Test of Psycholinguistic Abilities. Data were analyzed by analysis of variance. **Findings:** Visual memory appears to mature between the latter part of first grade and the beginning of fourth grade. Analysis of the difference scores between the scale scores for both administrations of the test revealed a significant interaction between race and social class and race and subtests. Development for the Black children exceeded that of the white subjects. In general, with the Black sample, development was greater as social class level increased. For the white children, in general, development was less as social class level increased. Visual sequential memory and visual closure were areas of greatest development for the Black sample. For the white sample, visual sequential memory, auditory sequential memory, and auditory vocal association were subtests with the greatest development. Verbal expression was a significant area of least development for both Black children and white children. In addition, white children displayed relatively little development in auditory reception, visual motor association, and manual expression. **Duration:** April 1972-September 1972.

Personality

32-EA-1 CHILDREN'S IMITATION OF ADULTS' BEHAVIOR CONTROL TECHNIQUES

Investigator(s): Donna M. Gelfand, Ph.D., Professor; Donald P. Hartmann, Ph.D., Associate Professor; Mary Ann Mahan, B.A.; and Anne K. Lamb, B.A., Department of Psychology, University of Utah, Salt Lake City, Utah 84112.
Purpose: To test predictions drawn from social learning theory that children will imitate whatever behavior control techniques adults use on them, whether the technique is use of rewards, use of punishment (fines), a combination of reward and punishment, or no adult reaction.
Subjects: 16 normal children, ages 6 and 7.
Methods: The children were randomly assigned to one of four treatment conditions in which they received a reward only, received fines only, received both rewards and fines, or received neither rewards nor fines for their individual performance on a marble drop task. Each child then taught another child the game and could reward the learner's performance in any manner he wished. Data were analyzed by analysis of variance.
Findings: Children trained the learner child in a manner strikingly similar to the way in which they had been trained. The child-teachers were as likely to imitate a rewarding model as a punishing model, but any deviations from the model consisted of rewarding or failing to fine.
Duration: June 1972-June 1973.
Cooperating group(s): University of Utah Research Committee.

32-EA-2 EXPECTANCY FOR STIMULUS NOVELTY AS A MOTIVATIONAL DETERMINANT IN YOUNG CHILDREN'S PERFORMANCE

Investigator(s): Lesley A. Diehl, Ph.D., Associate Professor, Department of Educational Psychology, State University College at Oneonta, Oneonta, New York 13820.
Purpose: To examine the effectiveness of stimulus novelty expectation in motivating children's performance.

Subjects: 30 children enrolled in a university campus preschool.

Methods: The children were asked to play a game of selecting a toy to play with for a few minutes. Each child was permitted 21 trials in the pre-exposure-lever pull-play sequence. Three degrees of novelty of incentive were manipulated by each child. Confirmation and disconfirmation in trial and practice demonstrated the motivational effects in lever speeds on subsequent trials.

Duration: 1972-1973.

Cooperating group(s): Campus School, State University College at Oneonta.

Publications: Results of the study are available from the investigator.

32-EA-3 CLINICAL EVALUATION AT A LATER AGE OF CHILDREN STUDIED IN A RESEARCH PROJECT ON THE NORMAL SEPARATION-INDIVIDUATION PROCESS DURING THE FIRST 3 YEARS OF LIFE

Investigator(s): Margaret S. Mahler, M.D., Director of Research; John B. McDevitt, M.D., Associate Director of Research; and Anni Bergman, Masters Children's Center, 75 Horatio Street, New York, New York 10014.

Purpose: To conduct a follow-up study of the personality development of children from nine families who participated in a research project on the normal separation-individuation process from 1959 to 1971 at the Masters Children's Center.

Subjects: At the time of follow-up, three children are age 7, five are 8 1/2, three are 9 1/2, two are 10 1/2, and four are age 13.

Methods: Data collected earlier on the children will be reviewed. A systematic clinical follow-up study will be conducted of the children's personality development through interviews with the parents, children, and teachers. Psychological testing will be conducted and school records will be examined. A study will be made of the relationship between early development and later outcome for each child. (See *Research Relating to Children, Bulletin 18*, 1964, 149.)

Duration: January 1972-December 1974.

32-EA-4 EXECUTIVE COMPETENCE IN 1-YEAR-OLD CHILDREN

Investigator(s): Charles Wenar, Ph.D., Professor, Department of Psychology, Ohio State University, Columbus, Ohio 43210.

Purpose: To study the effects of different maternal behavior on the development of executive competence in children between 12 and 20 months of age.

Subjects: 12 boys and 13 girls, age 1. Half of the children were rated high on executive competence, half low, but all were in the normal range.

Methods: Naturalistic observations were made in the home at 4-week intervals. A repeated measures analysis of variance design was employed.

Findings: When given a choice, the children prefer to explore the environment rather than initiate social contacts with the mother. Exploration elicits significantly less affect than interaction with the mother.

Duration: 1964-1973.

Cooperating group(s): National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

Publications: Executive competence and spontaneous behavior in one-year olds. *Child Development*, 1972, 43, 256-260.

32-EA-5 BEHAVIOR PATTERNS OF NURSERY SCHOOL CHILDREN

Investigator(s): J. M. Sassenrath, Ph.D., School of Education, University of California at Davis, Davis, California 95616; S. R. Pinneau, Ph.D., Child Study Center, San Fernando Valley State College, 18111 Nordhoff Street, Northridge, California 91326; and R. C. Dillehay, Ph.D., School of Education, University of Kentucky, Lexington, Kentucky 40506.
Purpose: To determine the common patterns of behavior that are characteristic of children in a nursery school setting.
Subjects: 138 nursery school children.
Methods: The children were rated independently by three teachers on a 7-point scale for each of 61 scales of the California Behavior Inventory. The teachers' ratings were totalled to obtain a composite score for each child on each scale. All 61 ratings were then intercorrelated by the Pearson product-moment procedure. A principal components method was used to obtain factors that had eigenvalues of 1.00 or larger. The varimax procedure was employed to rotate the factors.
Findings: The results provided nine factors that have been tentatively identified as emotional reactivity, sociability, socialization, verbal creativity, confidence, achievement, affability, self-assertion, and affection. Together, these factors appear to constitute a basic description of the personality characteristics of children in a nursery school setting, at least as determined through the 61 rating scales employed.
Duration: March 1970-November 1972.

32-EA-6 THE FACTORIAL SIMILARITY IN BEHAVIOR PATTERNS OF TWO GROUPS OF NURSERY SCHOOL CHILDREN

Investigator(s): J. M. Sassenrath, Ph.D., School of Education, University of California at Davis, Davis, California 95616; S. R. Pinneau, Ph.D., Child Study Center, San Fernando Valley State College, 18111 Nordhoff Street, Northridge, California 91326; and R. C. Dillehay, Ph.D., School of Education, University of Kentucky, Lexington, Kentucky 40506.
Purpose: To estimate the factorial invariance or replicability of factors obtained on two samples of nursery school children who were rated on behaviors.
Subjects: 138 nursery school children.
Methods: Three teachers totalled 61 ratings on a 7-point scale to obtain scores for each child on each scale. The 61 ratings for each group of 69 children were intercorrelated by the Pearson product-moment procedure. A principal components analysis was used to extract factors that had eigenvalues of 1.00 or larger. The varimax procedure was used to rotate the factors. Coefficients of factor invariance (the relationship between factors) was estimated between the two samples.
Findings: Results indicated that a large number of the factors are similar to one another between the two samples. These factors are sociability, emotional reactivity, socialization, confidence, verbal creativity, and achievement. Three factors from both samples of children were only vaguely similar to one another, and one sample produced three small factors that did not have a counterpart for the other sample. It should be concluded, however, that the large number of similar factors for the two samples constituted a basic description of the personality characteristics of children in a nursery school setting, at least as determined through the 61 rating scales employed. If the preschool period is as important for personality and educational development as some people have suggested, then the several factors that are similar for the two samples may be important indicators of later personality and school success.
Duration: May 1970-November 1972.

32-EA-7 SIMILARITIES AND DIFFERENCES IN FACTORED BEHAVIOR PATTERNS OF BOYS AND GIRLS IN NURSERY SCHOOL

Investigator(s): J. M. Sassenrath, Ph.D., School of Education, University of California at Davis, Davis, California 95616; S. R. Pinneau, Ph.D., Child Study Center, San Fernando Valley State College, 18111 Nordhoff Street, Northridge, California 91326; and R. C. Dillehay, Ph.D., School of Education, University of Kentucky, Lexington, Kentucky 40506.
Purpose: To determine the nature of the behavior patterns or factors for boys and girls in a nursery school, and to determine if the two sets of factors are invariant or related to one another for the two sexes.
Subjects: 73 boys and 65 girls in nursery school.
Methods: The children were rated on 61 behaviors or scales by three nursery school teachers. Each of the 61 ratings were on a 7-point scale and the ratings by the teachers were totalled to obtain scores for each scale for each child. The scores were intercorrelated separately by the Pearson product-moment procedure. A principal components analysis was used to extract components or factors that had eigenvalues of 1.00 or larger. Coefficients of factor invariance were estimated between the boys and girls.
Findings: Results produced nine patterns of behavior for the boys and the girls. Six of the nine factor patterns (emotional reactivity, sociability, confidence, socialization, achievement, and affection) showed a high correlation between the boys and girls. Three of the factor patterns (self-assertion, affability, and verbal creativity) showed only a moderate relationship between the boys and girls. The large number of similar behavior patterns for both sexes constitutes a basic description of the personality characteristics of nursery school children. Conceivably, the 61 rating scales can be eliminated and six to nine factorially pure scales can be used more readily by nursery school teachers. It should be pointed out, however, that differences in the importance of these nine factors for boys and girls are shown by the amount of variance accounted for by each factor. For the boys, the sociability, socialization, verbal creativity, and affection factor patterns were more important. For the girls, the emotional reactivity, confidence, affability, and self-assertion behavior patterns were more important. If the preschool period is important for personality development, then perhaps the several factors for boys and girls may be important indicators of later personality development and school success.
Duration: March 1970-November 1972.

32-EA-8 A LONGITUDINAL STUDY OF THE BEHAVIOR PATTERNS OF NURSERY SCHOOL CHILDREN FROM AGES 3 TO 4 1/2 YEARS

Investigator(s): J. M. Sassenrath, Ph.D., School of Education, University of California at Davis, Davis, California 95616; S. R. Pinneau, Ph.D., Child Study Center, San Fernando Valley State College, 18111 Nordhoff Street, Northridge, California 91326; and R. C. Dillehay, Ph.D., School of Education, University of Kentucky, Lexington, Kentucky 40506.
Purpose: To determine (1) the stability of behavior patterns or factors of nursery school children at ages 3 and 4 1/2 years, and (2) if children consistently display a particular behavior pattern over 1 1/2 years in nursery school.
Subjects: 69 nursery school boys and girls, ages 3 and 4 1/2.
Methods: The children were rated on 61 behaviors by three teachers. Each child was rated when he was 3 years old and when he was 4 1/2 years old. Each of the 61 ratings were on a 7-point scale, and total scores on each scale for each child were obtained at both age levels. The scores were intercorrelated separately by the Pearson product-moment procedure. A principal components analysis was used to extract factors and those with eigenvalues of 1.00 or larger were rotated by the varimax method. Coefficients of factor invariance and coefficients of subject invariance were calculated at age 3 and age 4 1/2.

Findings: Results produced 11 patterns of behavior at each of the two age levels. Ten of the factors had moderate to high (.45 to .96) coefficients of factor invariance for the two age levels. Thus, there is some consistency as well as change in the behavior patterns or personality of children in a nursery school between ages 3 and 4 1/2 years. The 10 related behavior patterns were identified as sociability, emotional reactivity, socialization, confidence, affection, verbal creativity, achievement, affability, obnoxious, and maturity. These factors could have occurred at both age levels even if there were no individual but only group consistency over the 18-month period. Individual consistency from age 3 to 4 1/2 years was estimated by correlating the factor scores for all the children between the two age levels. These correlations among the factor scores for the children at the two age levels ranged from .73 to .30. Thus, there is also some consistency as well as change in the factor scores of these children from age 3 to 4 1/2 years.
Duration: March 1970-November 1972.

32-EB-1 OBLIGATION, ACHIEVEMENT, AND SELF-CONCEPTION IN ELEMENTARY SCHOOL CHILDREN

Investigator(s): John C. Glidewell, Ph.D., Professor, Department of Education, University of Chicago, 5835 South Kimbark Avenue, Chicago, Illinois 60637.
Purpose: To isolate the effects of grading and other evaluations on the development of a sense of obligation to learn and on 10 dimensions of self-conception.
Subjects: Approximately 200 elementary school boys and girls, ages 9 to 11, from several races, all of whom are from middle class families.
Methods: The child's sense of obligation, awareness of evaluation, the meaning of evaluation, and the meaning of grades received were determined through an interview. The child's achievement, grades, and other recorded evaluations were collected from school records. The child's self-concept was determined through a questionnaire.
Duration: September 1972-September 1975.

32-ED-1 SEX DIFFERENCES IN DETERMINANTS OF AGGRESSION

Investigator(s): Paula Joan Caplan, M.A., Duke Center for the Study of Aging and Human Development, Box 2948, Duke Hospital, Durham, North Carolina 27710.
Purpose: To study two determinants of aggression that affect the two sexes in opposite ways, and to observe the differences in conditions that increase the variability of antisocial and prosocial behavior for boys and for girls.
Subjects: 80 Black children, ages 7 and 8, equally divided by sex, from lower class families, enrolled in public schools.
Methods: All children performed a symbol-digit task. Twenty children of each sex received failure feedback and 20 received success feedback. All were then given candy and told they could keep it or leave some or all for other children. While given that chance, they were either observed or not observed. The number of candies left was used as the dependent variable. Data were analyzed by analysis of variance on means and variances.
Findings: No difference was found among the group means. Score variance was found to be greatest for girls in the Failure-Unobserved condition and least in the Failure-Observed condition. For boys, the variance was greatest in the Failure-Observed condition and least in the Failure-Unobserved condition.
Duration: January 1972-February 1972.
Cooperating group(s): National Institute of Child Health and Human Development,

National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

Publications: Results of the study are available from the investigator.

32-ED-2 MONITORED PLAY THERAPY

Investigator(s): Luciano L'Abate, Ph.D., Professor, Department of Psychology, Georgia State University, 33 Gilmer Street, S.E., Atlanta, Georgia 30303.

Purpose: To investigate the role of aggression and construction in children's play therapy.

Subjects: Approximately 30 white, middle class children, ages 6 to 13 years.

Methods: A specially constructed playroom was used that allowed the monitoring of the verbal and nonverbal aspects of the children's play. The Wechsler Intelligence Scale for Children was administered to the children.

Findings: A decrease in constructive behavior was found as the amount of aggression decreased. The time the children spent on "shooting" was found to be negatively correlated with the children's IQ scores.

Duration: 1968-1975.

32-EE-1 PASSIVE ADDICTION IN THE HUMAN NEWBORN

Investigator(s): Reuben E. Kron, M.D., Associate Professor, Department of Psychiatry, Hospital of the University of Pennsylvania, 3600 Spruce Street, Philadelphia, Pennsylvania 19104.

Purpose: To study drug effects and narcotic withdrawal effects which are secondary to maternal addiction.

Subjects: Approximately 100 passively addicted neonates and approximately 100 normal neonates.

Methods: Measures of addictive behavior (e.g., nutritive sucking) were compared between the two groups to determine the magnitude and persistence of drug effects on the infant from maternal narcotic addiction.

Findings: Maternal drug addiction affects newborn adaptive behavior. Results suggest that methadone addiction may be more noxious to the infant than heroin addiction. Current methods of treating the neonatal narcotic abstinence syndrome are inadequate.

Duration: September 1971-August 1974.

Publications: Blatman, S. and Hasselmeyer, E. H. (Eds.) Narcotics, pregnant women, and their children. *Proceedings of the National Institute of Child Health and Human Development*, May 1972.

32-EG-1 THE INFLUENCE OF SINISTRALITY ON THE GROWTH, DEVELOPMENT, EDUCATIONAL AND PERSONAL RESPONSE OF CHILDREN

Investigator(s): Theodore H. Blau, Ph.D., 213 East Davis Boulevard, Tampa, Florida 33606.

Purpose: To evaluate the impact of handedness on the development of children.

Subjects: 700 children, ages 4 to 16.

Methods: Parental interviews were conducted and 6 hours of psychological evaluations were made. The data were interpreted for the parents and a later follow-up study was conducted which included the parents and the school. Subsamples of siblings and parents undergoing the same treatment were studied.

Findings: There was a much higher frequency of sinistrals or sinistral-related children among delinquents, enuretic children, children with behavioral disorders, and children with academic difficulties. University populations show a higher percentage of sinistrals than the base rate. Creative and high achieving people in a wide variety of areas show a higher rate of sinistrals than the base rate.
Duration: 1960-1975.

32-EG-2 MEASUREMENT OF BUREAUCRATIC ORIENTATION

Investigator(s): Leonard V. Gordon, Ph.D., Professor, Department of Educational Psychology, State University of New York at Albany, 1400 Washington Avenue, Albany, New York 12222.
Purpose: To explore the nature of the bureaucratic personality in the younger student, and to investigate the utility of its measurement.
Subjects: Children in grades 5 through 12.
Methods: The School Environment Preference Schedule (SEPS) has been developed for the study. The instrument measures a personality construct (bureaucratic orientation) which measures the extent to which the individual endorses behaviors, values, and attitudes which are fostered and rewarded in classical bureaucratic organizations.
Findings: There were consistent negative correlations between the SEPS and both IQ and school grades. There is a monotonic decrease in bureaucratic orientation from grade 6 through grade 12. A positive relationship exists between score on the SEPS and attitudes towards school.
Duration: 1967-continuing.

Social

32-FA-1 LONGITUDINAL STUDY OF THE PERSISTENCE OF CHILDREN'S PLAY PATTERNS FROM NURSERY SCHOOL TO THE INTERMEDIATE GRADES

Investigator(s): Beverly Fagot, Ph.D., Assistant Professor, Department of Psychology; and Isabelle Littman, Ph.D., Research Associate, Department of Special Education, University of Oregon, Eugene, Oregon 97403.
Purpose: To determine (1) if types of play patterns persist, (2) if interest patterns are related to academic achievement, (3) the persistence of sex-typed play patterns, and, (4) if sex-typed play patterns are related to academic success or to scores on an embedded figures test.
Subjects: 36 children, ages 6 and 10, equally divided by sex, from middle class professional families. The children attended the same nursery school at age 3.
Methods: The same observation schedule was used to observe all children at age 3 1/2 in the nursery school. In the follow-up study, all children were given an interest inventory, and responses were grouped to conform to the nursery school observation schedule. Teachers were asked to rate each child on academic subjects. Each child was given the children's form of the Witkin Embedded Figures Test.
Findings: General and sex-typed interest patterns were found to be highly persistent. Moderate relationships were found between academic success and general interest patterns (e.g., interest in reading was negatively related to outdoor play preference). Sex-

typed play interests were found to be persistent but unrelated to academic proficiency ratings. Boys did better than girls on the embedded figures test, but girls who preferred male activities did as well as the boys.

Duration: Spring 1965-spring 1973.

Cooperating group(s): Congregational Church Nursery School and School District 4J, Eugene, Oregon.

32-FA-2 PERSONAL-SOCIAL BEHAVIORS OF INFANTS

Investigator(s): J. Ronald Lally, Ed.D., Director; and Alice S. Honig, M.A., Program Supervisor, Syracuse University Family Development Research Program, Syracuse University, 100 Walnut Place, Syracuse, New York 13210.

Purpose: To assess the social-emotional behaviors of disadvantaged infants who have attended the Syracuse University Children's Center from the age of 6 to 36 months, and to compare this group with infants who have not attended the program but have been enrolled in local nursery schools or day care centers prior to age 36 months.

Subjects: Male and female, Black and Caucasian infants, aged 36 months.

Methods: The Emmerich Observational Scale of Personal-Social Constructs will be used to assess the children. Two observers will rate each infant in his natural school setting on 127 unipolar scales and 21 bipolar scales. The same infants will be reassessed at ages 48 and 60 months.

Duration: 1972-1975.

32-FA-3 HIGH SCHOOL AS MEETING PLACE

Investigator(s): Joanne B. Eicher, Ph.D., Professor, Department of Human Environment and Design, College of Human Ecology, Michigan State University, East Lansing, Michigan 48823; and Eleanor A. Kelley, Ph.D., Professor, Department of Home Economics, Louisiana State University, Baton Rouge, Louisiana 70803.

Purpose: To investigate the relationship between adolescent dress and social acceptance.

Subjects: Adolescent girls in a single classroom of a high school composed of students from both disadvantaged and upper-middle class backgrounds who were studied over a 4-year period (grades 9 through 12).

Methods: The students were interviewed and rated on personal appearance during their freshman and senior years. Each girl's opinions of others, of herself, and of her group were determined. A questionnaire was administered each year to collect data on personal background and choice of friends.

Findings: Results indicate that the factors that lead to the pursual of friendships are (in order of importance): dress, personality, and common interests.

Duration: 1971-1972.

Cooperating group(s): Agricultural Experiment Station, Michigan State University.

Publications: High school as meeting place. *Michigan Journal of Secondary Education*, Winter 1972, 13(2); Hendricks, S. H.; Kelley, E. A.; and Eicher, J. B. Senior girls' appearance and social acceptance. *Journal of Home Economics*, 1968, 60(3); Kelley, E. A. and Eicher, J. B. Popularity, group membership, and dress. *Journal of Home Economics*, 1970, 62(5).

32-FA-4 SOCIAL ATTRACTIVENESS OF CHILDREN WITH LEARNING DISABILITIES IN ELEMENTARY CLASSES

Investigator(s): Tanis Schwartz Bryan, Ph.D., Assistant Professor, College of Education, University of Illinois at Chicago Circle, Box 4348, Chicago, Illinois 60680.

Purpose: To investigate the social relationships of learning disabled children; and to determine whether these children are social isolates, rejected, or have specific learning disabilities.

Subjects: Approximately 1,400 children in third, fourth, and fifth grade classes in one school district. There is one child, at least, in each classroom who is labeled as learning disabled by the special services staff.

Methods: A sociometric technique has been administered to 1,400 children. This included standard questions like: Who are three of your friends? Who are not three of your friends? Who has a hard time staying in his seat? The technique was administered to 68 classrooms. The data are being analyzed by matching a control child to the learning disabled child on the basis of sex, race, and grade. Data will be subjected to an analysis of variance to determine whether learning disabled children are more or less attractive to peers, and whether socially inappropriate behaviors are associated with them.

Findings: Data are being coded. Preliminary analysis, tests of three items, suggest that learning disabled children compared to academically successful children are unhappy and worried, but not children who find it hard to stay in their seats.

Duration: October 1972-June 1973.

Cooperating group(s): Illinois State Pediatric Institute.

Publications: Copies of the study are available from the investigator.

32-FA-5 INTERPERSONAL CONTROLS OF CHILD BEHAVIOR IN THE CLASSROOM

Investigator(s): Robert B. Cairns, Ph.D., Professor, Department of Psychology, Indiana University, Bloomington, Indiana 47401.

Purpose: To identify the principal interpersonal controls that seem to be operative in classroom interchanges and activities, and to identify what roles such events actually serve in a common interaction circumstance.

Subjects: Experiment I: Approximately 200 children, grades 3 to 5, in eight classrooms in Monroe County, Indiana. Experiment II: Twenty children, 10 boys and 10 girls, randomly selected from 10 third, fourth, and fifth grade classrooms in the same county. The children are from middle and lower middle class backgrounds.

Methods: In Experiment I, each of the eight classrooms was observed long enough to complete the criterion of the observation of 20 positive and 20 negative evaluations. In each observation, the eliciting events for evaluation were recorded. They included the exact statement of the evaluation and the verbal content in which it occurred, and the behaviors of the child that immediately followed the evaluation. Positive and negative events were recorded sequentially. The behavior record provided (1) the eliciting conditions for social evaluations of both a positive and negative sort, (2) the verbal context of the evaluation, and (3) the immediate consequences produced in the child behavior. In Experiment II, the observer designated two children to be observed in each of the 10 classes. The activities of the child were traced for a 20-minute period on each of two successive days. A detailed account was made of the child's activities with an entry made every 5 seconds. A record was also made of the various controlling events that could potentially be implicated as determinants of the child's ongoing behavior, including instructions, lectures, comments, and evaluations of the teacher; comments and behaviors of peers; and self-produced activities. The verbal activities of the teacher were also recorded. The data analysis focused upon the likelihood that a given type of event would alter the ongoing activity of the child.

Findings: Tentative results indicate that approval and disapproval statements are normally embedded in a long discourse and seldom occur as disembodied, single events. Negative events tend to be confounded with additional directional statements by the teacher on what is incorrect or wrong about the response or activity and what it is that the child must do to improve his performance. Events that elicit negative events tend to be either previously prohibited activities or blatantly incorrect responses, while events that elicit positive events are much more diverse and less readily identifiable as being behaviors that have been previously defined as being preferred responses. The behavior that follows negative evaluations was typically found to be a recycling of the activity that immediately preceded the negative statement. The rareness of both positive and negative evaluations suggests that alternative methods of control are primary determinants of the child's activity in the classroom.

Duration: June 1971-continuing.

Cooperating group(s): National Institute of Education, National Center for Educational Research and Development, Office of Education, U. S. Department of Health, Education, and Welfare.

Publications: Cairns, R. B. Attention and meaning as determinants of social reinforcer effectiveness. *Child Development*, 1970, 41, 1067-1082; Paris, S. G. and Cairns, R. B. An experimental and ethological investigation of social reinforcement in retarded children. *Child Development*, 1972, 43, 717-729; Warren, V. L. and Cairns, R. B. Social reinforcement satiation: An outcome of frequency or ambiguity? *Journal of Experimental Child Psychology*, 1972, 13, 249-260.

32-FA-6 THE MULTIPLE FUNCTIONS OF SOCIAL REINFORCERS

Investigator(s): Robert B. Cairns, Ph.D., Professor, Department of Psychology, Indiana University, Bloomington, Indiana 47401.

Purpose: To investigate the relative effectiveness of praise and criticism as social reinforcers and their effects on learning and performance, to investigate the modification of the signal or informational properties of verbal comments to determine the plasticity of utility of a social cue in a given context, and to investigate the actual uses of positive and negative comments in the classroom.

Subjects: Experiment I: 90 public school children in first and second grade, ages 6-8 to 9-0. Experiment II: four grade 1, four grade 2, and four grade 3 classrooms.

Methods: In Experiment I, the children were randomly assigned to one of nine treatment groups. Three different evaluative comments were used as outcome events: "good," "wrong," and "ahwe" (a Polynesian word used as a novel, ambiguous comment). The comments were constructed in three ways: the event could be defined before the task as indicating correct performance, incorrect performance, or simply not defined. The induction of signal properties was given in the pretask instructions. A two-choice discrimination panel and a control module were used. The children were first given instructions on the task followed by several practice trials. The arbitrarily *correct* button was predetermined and counterbalanced so that each button was correct for half of the subjects in each group. The discrimination learning task continued for 30 trials. The number of responses which yielded the verbal outcome was used as the measure of performance. In Experiment II, an experimenter observed each of the 12 classrooms twice within a 1-week period. The behavioral analysis was focused on the evaluative comments of the teacher and the events in the classroom that immediately preceded the comments. Interchanges between the teacher and her pupils were recorded every 5 seconds for 10 minutes. The teacher's evaluative comments were coded according to five major categories: (1) Organization, a comment not contingent upon any clearly specifiable response of the child; (2) Information, an evaluative comment preceded by the production of an objectively correct or incorrect response by the child; (3) Qualitative Evaluation, a comment that compared a particular response of the child against a local, individual, or unspecified standard; (4) Query, a comment with a rising intonation sometimes used as probes for understanding; and (5) Permission, a comment used to grant or deny an explicit request by the child. The reliability of the categorization procedure was determined by two independent raters and was found to range from .92 to .96.

Findings: Undefined negative comments promoted discrimination learning significantly better than an undefined nonsense word. Positive comments were used more frequently and in more functions than negative comments in the classroom setting. Words of assent approval were relatively ambiguous events for many children.

Duration: June 1971-September 1972.

Cooperating group(s): National Institute of Education, National Center for Educational Research and Development, Office of Education, U. S. Department of Health, Education, and Welfare.

Publications: Cairns, R. B. The information properties of verbal and nonverbal events. *Journal of Personality and Social Psychology*, 1967, 5, 353-357; Cairns, R. B. and Paris, S. G. Informational determinants of social reinforcement effectiveness among retarded children. *American Journal of Mental Deficiency*, 1971, 76, 363-369.

32-FA-7 DEVELOPMENTAL CASES IN AN OSLO MILIEU

Investigator(s): Aase Gruda Skard, Ph.D., Professor; and Aine Brekstad, Lecturer, Institute of Psychology, University of Oslo, Oslo, Norway.

Purpose: To follow the changes (with respect to dependency-independency and aggression-withdrawal) of individual children in their interplay with parents, at school, and during free time activities.

Subjects: 19 children: 10 boys and 9 girls, studied from the prenatal period regularly to age 20. The children are from low socioeconomic families.

Methods: Interviews were conducted with the parents of the children before the children were born. Projective and other developmental tests and a questionnaire were administered to the children, and they were interviewed. The children were observed in play groups and in the school classrooms.

Findings: Differences were found in the doll play behavior of London and Oslo preschool children.

Duration: 1952-continuing.

Publications: Haggard; Brekstad, A.; and Skard, A. G. On the reliability of enamnestic interview. *Journal of Abnormal and Social Psychology*, 1960, 61, 311-318; Skard, A. G. Orality in the first nine years of life. *Nordisk Psykologi*, 1966, 18, 149-180.

32-FC-1 DRUG ABUSE EDUCATION BY THE TV PRODUCTION PROCESS

Investigator(s): Barbara Y. Dolan, M.A., TV Projects Director, Port Washington Public Schools, 100 Campus Drive, Port Washington, New York 11050.

Purpose: To study the process of student television production in preventive drug education (on the production and utilization levels), in order to offer it as a replicable, nationwide alternative approach to the learning process.

Subjects: 439 students, grades 5 to 9, from various backgrounds.

Methods: The behavior of students involved with the TV production process will be examined and compared with the behavior of (1) students involved in various other media experiments, and (2) students who are not exposed to media. One experimental group and three control groups will be employed. Research instruments include the California

Personality Inventory, Anime Attitude Scale, Drug Usage Inventory, interviews, and videotapes. The students' behavior change will be examined in the areas of self-image, attitudes towards society and drugs, and patterns of drug use.
Duration: March 1972-March 1974.
Publications: Results of the study are available from the investigator.

32-FC-2 A STUDY OF THE NEED FOR DRUG ABUSE EDUCATION FOR CHILDREN IN INDIANA PUBLIC SCHOOLS

Investigator(s): L. Stanley Wenck, Ed.D., Associate Professor, Department of Psychology, Ball State University, Muncie, Indiana 47306.
Purpose: To determine the need and the type of drug abuse education programs desired by chief school administrators throughout the State of Indiana.
Subjects: 90 school superintendents in Indiana.
Methods: The 90 school corporations were selected through stratified random sampling which considered the factors of size of pupil enrollment, per pupil expenditure, and geographical coverage of the state. Letters were sent to each school superintendent to explain the project and briefly detail the basic questions of the project. Four to 5 days later, telephone interviews were conducted with each superintendent to obtain his opinions on the value of public school drug abuse education programs.
Findings: Ninety-five percent of the superintendents felt that some form of drug abuse education was definitely needed, and 50 percent felt that it should begin as early as grades 1, 2, and 3. The use of consultants, the acquisition of special materials, and the attendance of local staff at special seminars were the most typically mentioned suggestions.
Duration: November 1972-January 1973.
Cooperating group(s): Drug Abuse Division, Indiana Department of Mental Health.
Publications: Results of the study are available from the investigator.

32-FD-1 DEVELOPMENT OF ORIENTATIONS TO WORK AMONG ELEMENTARY SCHOOL CHILDREN

Investigator(s): Bernard Goldstein, Ph.D., Professor, Department of Sociology, Rutgers College, Rutgers, The State University of New Jersey, 84 College Avenue, New Brunswick, New Jersey 08903.
Purpose: To investigate the ways in which definitions of work evolve in children.
Subjects: Urban, suburban, and rural boys and girls, grades 1 through 7, from various social classes and ethnic groups.
Methods: Instruments designed for use with children for comparable purposes will be tested for their applicability. An attempt will be made to select instruments that can be used across varying age groups and background variables.
Duration: July 1972-June 1976.
Cooperating group(s): Department of Vocational-Technical Education, State Department of Education, New Jersey.

SPECIAL GROUPS OF CHILDREN

Physically Handicapped

32-GB-1 SYSTEMATIC ORTHOPAEDIC EXAMINATION OF THE NEWBORN

Investigator(s): Robert S. Siffert, M.D., Chairman and Professor; Jacob F. Katz, M.D., Professor; Richard I. Ulin, M.D., Assistant Clinical Professor; and Benjamin Nachamie, M.D., Assistant Clinical Professor, Department of Orthopaedics, Mount Sinai School of Medicine, 100th Street and Fifth Avenue, New York, New York 10029.
Purpose: To screen neonates for overt orthopaedic defects, and to determine the role of intrauterine attitude of the genesis of developmental limb deformities.
Subjects: Approximately 25 normal newborn infants are examined each week.
Methods: An examination was performed three times each week to allow for comprehensive coverage of new births. Data will include records of each child examined. Those infants referred to an orthopaedic outpatient department for follow-up were checked to note their attendance and their progress.
Findings: The majority of the infants were found to be normal. Hip clicks associated with joint laxity have been noted, and infrequent miscellaneous conditions (e.g., Erb's palsy and bone fracture) have been found.
Duration: August 1972-continuing.
Cooperating group(s): Department of Pediatrics, Mount Sinai School of Medicine, New York, New York.

32-GB-2 IDENTIFICATION AND MANAGEMENT OF DEAFNESS IN EARLY INFANCY

Investigator(s): Daniel Ling, Ph.D., Associate Professor and Director, School of Human Communication Disorders, McGill University, 1266 Pine Avenue West, Montreal 112, Quebec, Canada.
Purpose: To develop methods of training young deaf children to speak in order to prevent long-term communication disability normally caused by early childhood deafness.
Subjects: A sample of deaf infants.
Methods: Various behavior modification techniques are being developed, and their use will be evaluated and reported. Procedures for the early detection of deafness will be studied with emphasis on diagnosis at 6 to 12 months of age.
Duration: April 1970-March 1974.

32-GB-3 BEHAVIOR AND LEARNING OF SCHOOL AGE RUBELLA CHILDREN

Investigator(s): Stella Chess, M.D., Professor, Department of Child Psychiatry, Medical Center, New York University, New York, New York 10003.
Purpose: To determine the special behavioral and intellectual consequences of congenital rubella; to use these findings to enhance the effectiveness of the treatment and education of the children, and to generalize the findings for the use of other professional workers concerned with the care of children affected by congenital rubella or who have multiple handicaps from other causes.

Subjects: 243 children, whose mothers contracted rubella during pregnancy. The children were initially identified by the Rubella Birth Defect Evaluation Project at the New York University Medical Center and participated in an earlier behavioral study when they were 2 1/2 to 5 years of age. In the present study the children are between 5 1/2 and 8 1/2 years old.
Methods: Data will be collected and analyzed, and correlations will be performed. The findings for each child will be used for planning services, for parental guidance, and as recommendations to agencies and personnel involved in the care and treatment of the child.
Duration: July 1972-January 1975.

32-GC-1 THE SOCIAL AND EMOTIONAL ADJUSTMENT OF CEREBRAL PALSIED INFANTS AND PRESCHOOL CHILDREN

Investigator(s): Katharine M. Banham, Ph.D., Associate Professor, Emeritus, Department of Psychology, Duke University, Durham, North Carolina 27706.
Purpose: To develop rating scales for measuring the social and emotional adjustment of infants and preschool children, and to compare the scores of cerebral palsied children with those of nonhandicapped children.
Subjects: 20 to 30 cerebral palsied children, ages 1 to 5, who are undergoing rehabilitation in a cerebral palsy hospital; and 20 to 30 normal children, who attend a university nursery school.
Methods: A specially designed checklist was devised to rate children's behavior in social settings with adults and other children. The checklist was marked by trained observers during and after timed samples of observed behavior which lasted 1 to 2 hours for two of the scales and 3 or 4 days for two other scales.
Findings: Cerebral palsied preschool children differ very little from nonhandicapped children in their scores on the rating scales.
Duration: Fall 1970-spring 1973.
Cooperating group(s): North Carolina Cerebral Palsy Hospital; Duke University Preschool Laboratory.

32-GC-2 A CLINICAL RESEARCH PROGRAM FOR ORAL-FACIAL-COMMUNICATIVE DISORDERS

Investigator(s): A. K. Cooper, Sr., D.D.S., D.Sc., Emeritus Director, Lancaster Cleft Palate Clinic, 24 North Lime Street, Lancaster, Pennsylvania 17603.
Purpose: To study the total rehabilitation of the cleft palate child through plastic surgery, dentistry, speech therapy, and medical and psychosocial evaluations.
Subjects: 300 children with cleft palates followed from birth to age 7.
Methods: Serial cephalofacial X-ray films, dental models, and a face mask were made at the first clinical visit. Data were collected on the history of the type of cleft, type and time of repair, and family background and socioeconomic status. The children received an otologic examination, audiometric testing, psychological testing, and their speech was tape recorded. Comparisons were made with a control group of children without cleft palates. (These data were obtained from the W. M. Krogman Center for Research in Child Growth and Development, Philadelphia.)
Findings: Genetic data agree with those of Fogh-Anderson of Denmark. Results indicate that surgical factors play little or no role in midfacial development. Orthodontic sequelae were also reduced.

Duration: October 1964-December 1977.
Cooperating group(s): National Institute of Dental Research, National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Krogman, W. M. *Craniofacial growth in man.* New York: Pergamon Press, 1971; Mazaheri, M. and Chalian, V. A. Cleft lip and palate habilitation. In V. A. Chalian, J. R. Drane, and S. M. Standish (Eds.), *Maxillofacial prosthetics.* Baltimore: The Williams & Wilkins Co., 1972; Dronamraju, K. R. On the heritability of liability to cleft lip and palate. Paper presented at the 30th Annual Meeting of the American Cleft Palate Association, Phoenix, April 1972; Krogman, W. M. *Child growth.* Ann Arbor, Michigan: University of Michigan Press, 1972.

32-GE-1 ONTARIO CRIPPLED CHILDREN'S CENTRE COORDINATED ARM

Investigator(s): Sidney Fishman, Ph.D., Senior Research Scientist; and Susan G. Bergholtz, B.S., Assistant Research Scientist, Department of Prosthetics and Orthotics, New York University Post-Graduate Medical School, 317 East 34th Street, New York, New York 10016.
Purpose: To investigate the functional characteristics of the Ontario Crippled Children's Centre coordinated prosthetic arm, and to obtain reactions of children using the system as well as the reactions of their parents and clinic members participating in the study.
Subjects: Seven boys and three girls, ages 5 to 16 (mean age 10.4), with the following etiologies: one unilateral forequarter, four bilateral amelias, two bilateral phocomelias, and three phocomelia/amelias.
Methods: Data will be gathered over a 6-month period, and evaluations will be performed on five separate occasions: at the initial visit, after training, and at 1, 3, and 6 months after fitting. Information will be collected on patient characteristics, training experiences, subjective reactions, and parent and clinic team reactions.
Findings: The unit has been favorably received by eight of the 10 children. It has been found useful primarily in feeding and in selected play activities.
Duration: November 1971-December 1972.
Cooperating group(s): Crippled Children's Commission, Grand Rapids, Michigan; University of Illinois, Chicago; Emory University, Atlanta; Children's Rehabilitation Center, Buffalo; Crippled Children's Hospital, Memphis; Crippled Children's Hospital, New Orleans; Kessler Institute, West Orange, New Jersey; Children's Hospital, Washington, D.C.; Shriner's Hospital, St. Louis; Shriner's Hospital, Springfield, Massachusetts.

32-GE-2 TOTAL CARE OF THE MULTIHANDICAPPED CHILD

Investigator(s): James T. Shelton, M.D., Medical Director; Ruth E. Smith, Ph.D., Director of Research; and Mary S. Leavitt, O.T.R., Porterville State Hospital, P. O. Box 2000, Porterville, California 93257.
Purpose: To improve the motor development, nutritional status, and cognitive and social development of mentally retarded hospitalized children.
Subjects: 64 severely or profoundly mentally retarded children: 35 girls and 29 boys, ages 2 to 10. All children had motor handicaps; most were spastic, a few were athetoid or hypotonic, and almost all were handicapped by visual and/or auditory impairment or epilepsy.
Methods: Each child was assigned to one of seven groups with two psychiatric technician (P.T.) group leaders on the day shift and one P.T. group leader on the afternoon shift. The group leaders were responsible for the basic nursing care and the

specific treatment programs for their patients. Treatment planning sessions were held for each child and involved the group leader, the nursing person in charge of the ward, occupational therapist, psychologist, and psychiatric social worker. The ward physician and physical therapist attended when possible. The ward physician reviewed all treatment plans after they were written. The focus of the motor development program was on head control, eye-hand coordination, and sitting balance. Patients with more advanced skills were worked with to develop independent sitting, forward progression (rolling, crawling), and ambulation. A daily range of motion was provided for almost two-thirds of the patients to help them overcome the effects of spasticity on their movement patterns or to reduce the likelihood of contractures developing. Approximately one-fourth of the patients needed additional stabilization exercises to teach them to control excessive movement, resulting from hypotonia or athetosis. Positioning was used to reduce orthopedic deformities. The project occupational therapists worked with individual patients and with small groups in sessions held at least once a week and consulted with the nursing staff to help them develop treatment techniques to meet emerging patient needs. Cognitive and social development was fostered by brightening the ward environment. The ward physician prescribed that all children, unless acutely ill, should be out of bed and up on mats on the floor or in wheelchairs from after breakfast to after dinner to provide more opportunity for both sensory and social stimulation. Patients were consistently grouped with the same technician to foster a relationship between patient and group leader and between patient and patient in a kind of simulated family. During the final 6 months of the project, two nurses acted as teachers. A room was converted to a schoolroom and 32 patients were selected to participate in one of seven activity groups led by the teacher. A five-meal plan was adopted to maximize nutritional status. The ward staff received training in specialized feeding techniques from hospital and project staff and from outside consultants.

Findings: Social and cognitive gains were measured by standardized intelligence tests and by subjective report. A Motor Maturity Evaluation Scale was administered to each child at the beginning of the project and then once each year. Both means and ranges of the children's scores showed a significant increase from the first rating to the final rating. During the project, 10 children learned to sit independently; four, to stand holding on; eight, to crawl; four, to walk with assistance; and two learned to walk independently. Fourteen patients showed rather consistent gains in flexion and/or extension, while seven showed consistent losses. Six children gained and 19 lost two or more IQ points; 22 showed no change. The mean mental age of the children showed a gain from 4.4 to 6.0 months. Twenty-two children gained and nine lost one or more months. Twenty-two children showed an increased rate of weight gain, 16 showed a consistent weight gain without a change in rate, six showed variable gains and losses in weight, eight showed no essential change, and two showed slight losses. Of 14 children on special dietary supplements, six made significant gains and two lost weight.

Duration: June 1969-May 1972.

Cooperating group(s): Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.

Publications: Copies of the report are available from Dr. Smith.

32-GE-3 DEVELOPMENT OF A MOTOR-ACADEMIC-PERCEPTUAL CURRICULUM FOR THE EARLY CHILDHOOD EDUCATION OF THE MULTIPLY HANDICAPPED

Investigator(s): Donna Kwall Smith, Ph.D., M-A-P Project Director; Judith R. Knox, M.S., M-A-P Media Specialist; Jean E. Clark, B.A., M-A-P Administrative Aide; and Alice H. Davis, M.Ed., Director, Special Education, ARIN Intermediate Unit #28, Indiana, Pennsylvania 15701.

Purpose: To develop, through research and experimentation, a practical, sequentially developed, motor-academic-perceptual curriculum for the early childhood education of the handicapped.

Subjects: 22 children: 6 girls and 16 boys, ages 4 to 8, who exhibit intellectual, physical, emotional, social, and/or educational handicaps.

Methods: Various kinds of media will be employed in an attempt to (1) enhance large muscle coordination; (2) decrease dependence in personal hygiene and care; (3) increase positive body-awareness; (4) improve adjustment to and participation in school routines; (5) enhance communication skills for information, personal rewards, and socialization; (6) increase verbalizations of thoughts; (7) develop readiness skills and concepts in areas of numbers and symbols; (8) enhance awareness and identification of shapes, quantities, and colors; (9) improve visual perception through exposure to visually stimulating materials and field trips; (10) improve auditory skills through screening, sorting, listening to and for certain sounds; (11) develop olfactory and gustatory discrimination skills through experimentation with tastes and smell; and (12) increase tactile skills through the use of objects and models.

Findings: Gross motor activities (e.g., running) are exceptionally important in establishing the potential to develop academic and perceptual skills in developmentally handicapped children, regardless of the handicapping condition.

Duration: September 1972-June 1973.

Cooperating group(s): U. S. Department of Health, Education, and Welfare.

Mentally Retarded

32-HA-1 THE DEVELOPMENTALLY HIGH RISK INFANT: A SURVEY FOR EARLY IDENTIFICATION OUTSIDE METROPOLITAN AREAS

Investigator(s): Rune J. Simeonsson, Ph.D., Assistant Professor, Department of Pediatrics, Meyer Children's Rehabilitation Institute, University of Nebraska Medical Center, 444 South 44th Street, Omaha, Nebraska 68131.

Purpose: To test the effectiveness of a questionnaire procedure in surveying the incidence and characteristics of developmentally high risk infants outside major metropolitan areas of Nebraska.

Subjects: Infants, less than 2 years old, suspected by a physician to have significant developmental problems based either on physical/biological and/or social/cultural factors.

Methods: A questionnaire was sent to 433 Nebraska physicians which requested the identification of the high risk infants. A random sample of 20 infants was selected from those identified for follow-up with the Denver Developmental Screening Test (DDST).

Findings: A total of 57 infants have been identified, mean age 11.5 months, approximately equally divided by sex. The infants had previous physical, medical and developmental problems. The follow-up sample indicated that the DDST scores were within range of chronological age with a slight delay in language.

Duration: November 1971-June 1972.

Cooperating group(s): National Science Foundation.

32-HA-2 COMPARISON OF SPECIAL AND REGULAR CLASS TEACHERS RATINGS OF ELEMENTARY AGE RETARDED STUDENTS

Investigator(s): T. M. Flynn, Ph.D., Assistant Professor, Department of Child and Family, Southern Illinois University, Carbondale, Illinois 62901.

Purpose: To determine if bias exists in special education teachers' behavioral ratings of the educable mentally handicapped child.

Subjects: 16 special education teachers and 35 regular class teachers who rated 61 educable mentally handicapped children, ages 8 to 14, who were enrolled in a supplemental special education program.

Methods: The educable retarded child was assigned to the regular classroom and was provided with a supplemental class period of 45 minutes each day for small group and individual tutoring. Both the special and regular class teachers observed the same students' behavior and rated them on the Elementary School Adjustment Scale. The scale has 30 multiple choice items which consist of five descriptions of behavior for each situation presented. Score comparisons were made between the two groups by means of a t-test. The discriminant analysis technique was used to make an item analysis.

Findings: The correlation between the ratings of the two groups of teachers was .74 (.001), but the special class teachers rated the special class students significantly higher (.025) than regular class teachers. The discriminant analysis revealed that only four items significantly discriminated between the two groups: the student's ability to evaluate his own work, follow instructions, participate in class discussions, and his curiosity in novel situations. The differences in total score between the special and regular class teachers' ratings appear to be caused by the different behavior observed in the different settings.

Duration: 1970-completed.

Publications: Flynn, T. M. Development of a multiple choice behavioral observation scale. Paper presented at a meeting of the American Educational Research Association, Minneapolis, March 1970.

32-HB-1 A LONGITUDINAL ASSESSMENT OF CLINICAL SERVICES TO THE MENTALLY RETARDED

Investigator(s): A. Barclay, Ph.D. and A. R. Sharp, M.D., Department of Psychology, 221 North Grand Boulevard, St. Louis University, St. Louis, Missouri 63103; and T. Kelly, M.A. and J. M. B. Endres, Ph.D., Child Development Clinic, Cardinal Glennon Hospital, Glennon Hall, 1401 South Grand Boulevard, St. Louis, Missouri 63104.

Purpose: To investigate changes in patient demographic characteristics over time as a function of the introduction of a network of diagnostic clinics in Missouri, and to study parental demographic characteristics and their perception and satisfaction with the Child Development Clinic services.

Subjects: 1,298 boys and girls, ages 6 months to 14 years, who are patients at the Child Development Clinic.

Methods: Parents submitted applications for their children's admission to the clinic which included medical and personal data. The children were then examined for mental retardation. Parent Attitude Questionnaires and Staff Attitude Questionnaires were completed. Observations were made of the staff's communication system.

Duration: October 1971-September 1973.

Publications: A paper was presented at the American Academy on Mental Retardation, Atlanta, May 1973.

32-HB-2 HALSTEAD-REITAN NEUROPSYCHOLOGICAL BATTERY

Investigator(s): Gerard W. Koth, M.A., Psychologist, Board of Education of Baltimore County, Rosedale Diagnostic Clinic, 8037 Philadelphia Road, Baltimore, Maryland 21237.
Purpose: To obtain normative information on a standardized battery of tests which is used in a diagnostic clinic to assess children with learning disabilities and other physical and mental limitations.
Subjects: 15 boys and 15 girls at each level ranging in age from 5 to 15, who represent a stratified random sample of the demographic conditions of the county school system. Each student was enrolled in a regular class, did not receive remedial assistance in reading, speech, or language, and was free of apparent emotional problems.
Methods: Each child was initially administered the Slosson Intelligence Test individually and was then given the Halstead-Reitan Neuropsychological Battery. The battery assesses conceptual, perceptual, and motor functioning of the individual, and can provide a comparative analysis of functioning of children, ages 5 through 15. Means, standard deviations, and ranges will be computed.
Duration: September 1971-May 1973.
Publications: Copies of the study are available from the investigator.

32-HB-3 EXODUS: DIAGNOSIS AND EVALUATION OF INSTITUTIONALIZED RETARDATES

Investigator(s): Manny Sternlicht, Ph.D., Chief, Habilitation Services, Willowbrook State School, 2760 Victory Boulevard, Staten Island, New York 10314.
Purpose: To establish a diagnostic and evaluation team at a state school for the mentally retarded, to determine which residents are ready for community placement, and to determine the specific service needs of each resident.
Subjects: Approximately 900 mentally retarded males and females of all ages.
Methods: All residents will be evaluated and a systematic re-evaluation procedure will be established to assure that services are kept current with individual needs.
Duration: September 1972-June 1974.
Cooperating group(s): Rehabilitation Services Administration, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.

32-HC-1 REPRESENTATIONAL DEVELOPMENT IN THE FAMILIAL RETARDATE

Investigator(s): Claire Golomb, Ph.D., Assistant Professor, Department of Psychology, Brandeis University, Waltham, Massachusetts 02154.
Purpose: To determine whether representational development in the familial retardate follows the principles established for normal subjects or deviates from normal representational development.
Subjects: 45 normal children, ages 3 to 6, attending nursery school and kindergarten; and 45 educable mentally retarded children living at home, mental ages: 3 to 6.
Methods: The research design includes matching normal controls and retardates on mental age, parents' socioeconomic status, environment (living with the family at home and attending school), past experience with similar tasks and materials, and motivation. Four representational tasks, which vary instructions, medium, and degree of definition of task, are used.
Duration: September 1972-May 1973.

32-HC-2 LOGICAL PROBLEM SOLVING BY RETARDED AND NORMAL CHILDREN

Investigator(s): Herman H. Spitz, Ph.D., Director of Research; and Barbara T. Nadler, M.A., Assistant, E. R. Johnstone Training and Research Center, Bordentown, New Jersey 08505.
Purpose: To study the logical problem solving capacity of retarded and normal children and to determine if retardates can develop a rule or principle to apply to task solution.
Subjects: Adolescent educable mentally retarded and nonretarded children of equal mental age.
Methods: Groups of institutionalized and noninstitutionalized retardates and the control group are given a simple 1-bit, binary problem in which opening the correct lever solves the problem. Those who solve the problem advance to a 2-bit problem, while those who fail are given further training.
Findings: The retarded children have far greater difficulty on the 1-bit problem than the normal children and make many more redundant responses.
Duration: April 1972-November 1973.

32-HE-1 COGNITIVE TRAINING FOR THE EDUCABLE MENTALLY RETARDED: SITUATIONAL PROBLEM SOLVING AND PLANNING

Investigator(s): Sheila A. Ross, Ph.D., Senior Research Associate, Palo Alto Medical Research Foundation, 860 Bryant Street, Palo Alto, California 94301; and Dorothea M. Ross, Ph.D., Associate Research Psychologist, University of California at San Francisco, San Francisco, California 94122.
Purpose: To provide intensive training in cognitive skills for young educable mentally retarded (EMR) children.
Subjects: Problem Solving Study: 30 EMR children, 13 boys and 17 girls, ages 7-0 to 10-8, with Stanford-Binet Intelligence Scale (SBIS) scores of 57 to 80, from middle class backgrounds. Planning Study: 28 EMR children, 19 girls and 9 boys, ages 7-0 to 9-6, with IQ scores (SBIS) of 57 to 79.
Methods: Both studies used pre- and posttraining tests, with half of each group serving as controls. The training for both studies was within the context of small group games, discussions, and craft activities. The control groups were given equal attention in an unrelated activity. Data were analyzed by analysis of covariance.
Findings: Both training programs proved to be highly effective. Subjects in the experimental groups showed marked posttraining improvement. Both programs were later tried out as regular classroom activities and again proved to be highly effective.
Duration: January 1970-completed.
Cooperating group(s): Bureau of Education for Handicapped, Office of Education, U. S. Department of Health, Education, and Welfare.

32-HE-2 PREVENTION OF COGNITIVE AND EMOTIONAL PROBLEMS IN YOUNG CHILDREN

Investigator(s): Archie A. Silver, M.D., Clinical Professor, Department of Psychiatry; and Rosa A. Hagin, Ph.D., Research Associate Professor, Department of Psychology, Medical Center, New York University, 560 First Avenue, New York, New York 10016.
Purpose: To locate vulnerable children entering first grade; and to intervene utilizing educational, psychological, and psychiatric techniques to prevent their learning failure.

Subjects: Approximately 400 first graders in intact groups in four schools on the lower east side of New York City.
Methods: Vulnerable children are located through an interdisciplinary study including the administration of the SEARCH battery. Intervention is offered in the child's own school through consultation and administration involving the child's teacher.
Duration: September 1969-continuing.
Cooperating group(s): New York Community Trust; New York Public Schools.
Publications: Profile of a first grade: A basis for preventive psychiatry. *Journal of the American Academy of Child Psychiatry,* 1972; Clinical-diagnostic use of the WPPSI in predicting learning disabilities in grade 1. *Journal of Special Education,* 1971, 5(3).

32-HK-1 A COMPARISON OF CHILD-MOTHER INTERACTIONAL BEHAVIOR IN CHILDREN WITH DEVELOPMENTAL DISORDERS AND NORMAL CHILDREN

Investigator(s): Leonard T. Volenski, Ph.D., Assistant Professor, Department of Medical Psychology, College of Medicine, University of Nebraska, Omaha, Nebraska 68105.
Purpose: To compare mother-child interactions involving children with disorders with mother-child interactions involving normal children, to identify problem behaviors which are specific to the disabled child and his mother, and to develop child management programs for parents of disabled children.
Subjects: 40 normal children, ages 4 to 6, equally divided by sex, and their mothers; and 40 children with developmental disorders, ages 4 to 6, equally divided by sex, and their mothers.
Methods: All mothers will be observed through a one-way mirror interacting with their children in a free play situation. Two trained observers will systematically record mother-child interactions using a time sampling technique and behavioral categories described in Patterson, G. R. *et al.* Manual for coding family interactions. Unpublished manuscript, Oregon Research Institute, Eugene, Oregon, 1969. Data were analyzed by correlations and sequential analysis.
Duration: October 1972-June 1973.
Cooperating group(s): C. L. Meyer Children's Rehabilitation Institute.
Publications: Results are available from the investigator.

32-HK-2 REDUCING DISABILITY OF IMPAIRED CHILDREN: A PARENT-CHILD INTERVENTION PROGRAM

Investigator(s): Gayle F. Gregersen, Ph.D., Director, Children's Behavior Therapy Unit; and Everett Murdock, Ph.D., Psychologist, Salt Lake Community Mental Health Center, 27 C Street, Salt Lake City, Utah 84103.
Purpose: To train disadvantaged parents of young developmentally disabled children in order to reduce the children's disabilities.
Subjects: Parents with a developmentally disabled young child who are unable to pay for special services.
Methods: Parent group meetings will be initiated to offer intervention and services to participating parents with the cooperation of several community agencies. Experts from these agencies will present methodological and service information. A 6-month training program will present simple techniques of behavior management to participating parents. Trainers will visit the homes for 1/2 day each week to offer general training as well as training dictated by the current family situation.
Duration: September 1972-June 1973.

Gifted

32-IA-1 SURVEY OF THE EFFECTIVENESS AND REASONS FOR PARENT ASSOCIATIONS FOR THE GIFTED

Investigator(s): Stuart S. Dansinger, Ed.S., School Psychologist, Department of Psychology, St. Louis Park Public Schools, St. Louis Park, Minnesota 55426; and Corey L. Gordon, School of Education, Macalester College, St. Paul, Minnesota 55101.

Purpose: To discover the reasons and advantages for parents of gifted children to form an association with educators to insure that the needs of gifted children are met.

Subjects: Parents in all parent associations for the gifted currently existing in California and Minnesota.

Methods: Each parent association was asked to submit information about how their chapter functions including newsletters and other program materials. The information was assessed in terms of the areas of effectiveness, how parent associations relate to the schools, and what they do to meet the needs of the gifted child. Various chapters will be compared and recommendations will be made for establishing chapters in other locales.

Findings: The parent associations have developed several programs to meet the needs of the gifted children. They are (1) collaborating successfully with school personnel, (2) setting up special programs for gifted children to participate in outside of school, and (3) planning many programs to educate parents of the gifted children.

Duration: January 1971-January 1973.

Emotionally Disturbed and Mentally Ill

32-JA-1 EVALUATION OF CHILDREN'S MENTAL HEALTH SERVICES

Investigator(s): Sydney Koret, Ph.D., Director, Convalescent Hospital for Children, 2075 Scottsville Road, Rochester, New York 14623.

Purpose: To measure the impact and effectiveness of a community mental health center and the individual treatment modalities upon emotionally disturbed children.

Subjects: All children treated at the Convalescent Hospital for Children, including day treatment children, ages 6 to 14; residential children, ages 6 to 13; outpatients, ages 0 to 19; and therapeutic nursery children, ages 3 to 6.

Methods: Parents and/or parent surrogates and teachers will rate each child on the Devereux Behavior Rating Scales at intake, discharge, and periodic follow-up points in time. Each child will serve as his own control, and changes on the various factors and the Devereux Scales will be analyzed by various techniques.

Duration: June 1972-June 1977.

Cooperating group(s): Monroe County School Districts; Mental Health Services Development Branch, National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

Publications: Results of the study are available from the investigator.

32-JA-2 MENTAL ILLNESS IN ADOLESCENCE

Investigator(s): Nils Johan Lavik, M.D., Researcher, Norges almenvitenskapelige forskningsrad, Oslo, Norway.
Purpose: To conduct a survey on adolescents in Oslo in relation to school, family, and socioeconomic factors.
Subjects: 200 to 300 children, age 16, in ninth grade classes in public schools in Oslo, Norway.
Methods: Data on the children will be collected through psychiatric interviews and from school authorities and school physicians.
Duration: 1973-1975.

32-JA-3 ADOLESCENT BEHAVIORAL CLASSIFICATION PROJECT

Investigator(s): Ralph Mason Dreger, Ph.D., Professor, Department of Psychology, Louisiana State University, Baton Rouge, Louisiana 70803.
Purpose: To obtain a classification of adolescent behavioral disorders by means of self-reports and parent reports of special behaviors.
Subjects: 6,600 adolescent boys and girls, ages 14 to 18, with identified problems and/or referral to mental health agencies. Approximately 2,200 children will act as controls.
Methods: An interdisciplinary and interage team devised 519 items of behaviors which are observable by the child and his parents or parent surrogates and include all emotional problems and disorders. This inventory will be administered to all subjects. Principal components factor analysis, varimax, and promax rotations will be performed on items as variables, with cluster analysis of profiles for types of deviant adolescents.
Duration: 1972-1975.
Cooperating group(s): Louisiana State Department of Hospitals; Mental Health Clinics, Louisiana State University.

32-JA-4 PSYCHOENDOCRINE STUDY OF ADOLESCENCE

Investigator(s): M. Krims, M.D., Assistant Clinical Professor, Department of Psychiatry, School of Medicine, Boston University, Boston, Massachusetts 02159.
Purpose: To conduct a psychoendocrine study of adolescence.
Subjects: Normal and emotionally disturbed boys and girls, ages 11 to 17.
Methods: This research is a collaborative psychological, biochemical, pediatric, social, statistical study of the mutual influences of sex hormones and psychic structure using the latest biochemical techniques, psychological tests, interviewing, and tape recordings.
Findings: Preliminary results indicate a high correlation between 17-ketosteroid excretion and the state of psychological adolescence.
Duration: 1970-continuing.

32-JB-1 THE RELATIONSHIP OF THE WISC TO THE ITPA IN EMOTIONALLY DISTURBED CHILDREN OF DIFFERENT RACES, SEXES, AND DIAGNOSES

Investigator(s): I. Louis Young, Ph.D., Psychologist; and Peter Cormack, Ph.D., Coordinator of Psychological Services, Convalescent Hospital for Children, 2075 Scottsville Road, Rochester, New York 14623.
Purpose: To replicate recent published findings of relationships between the Wechsler

Intelligence Scale for Children (WISC) (Verbal) and the Illinois Test of Psycholinguistic Abilities (ITPA) Auditory Scales and the WISC Performance and the ITPA Visual Scales with severely emotionally disturbed children; to determine the ITPA subtest results which best predict WISC IQ; and to determine if differences in race, psychiatric diagnosis, and sex significantly affect these scores.

Subjects: 78 severely emotionally disturbed children: 47 boys and 31 girls, ages 6 to 11. The sample consists of 50 Caucasians and 28 non-Caucasians, 18 of whom were diagnosed as psychotic and 60 as nonpsychotic.

Methods: A psychologist administered the WISC and the ITPA to all the children. Principal components factor analysis with varimax rotation and a stepwise multiple regression procedure were used to assess relationships between the sets of measures. Several analyses of variance were conducted on each set of subtest scores to examine the effects of race, sex, and diagnosis.

Findings: An overlap between the two instruments exists with emotionally disturbed children similar to that observed in normal and perceptually handicapped children. Test scores were significantly affected by race, psychotic-nonpsychotic (disturbed) diagnosis, and sex.

Duration: September 1970-June 1973.

Cooperating group(s): Astor Home for Children, Rhinebeck, New York.

32-JB-2 ORFF MUSIC FOR EMOTIONALLY DISTURBED CHILDREN

Investigator(s): Patricia Howie, M.A., Director of Education; and I. Louis Young, Ph.D., Psychologist, Convalescent Hospital for Children, 2075 Scottsville Road, Rochester, New York 14623.

Purpose: To study the development of disturbed children's ability to attend to auditory stimuli, and to develop music as a means of expression and communication.

Subjects: 66 severely disturbed children, ages 6 to 14, who are receiving intensive services of day treatment or residential treatment at the Convalescent Hospital for Children, Rochester, New York.

Methods: The music program involves the children through physical movement and eurythmics coupled with the harmonic acceptability of the pentatonic scale. Children are scheduled into music classes on the basis of group compatibility. Some of Carl Orff's curriculum has been modified to meet the needs of this group, but the basic concepts and rationale are the same. An instrument was developed to measure space sound organization and sensory-motor integration. Pre- and posttests were individually administered, and the results were analyzed to determine individual achievement.

Findings: All groups showed significant gains in the subtests measured. The group which received 1 1/2 hours of instruction each week was significantly ahead of the group which received 1 hour each week, although they were originally behind in music skills and were selected for additional work on this basis.

Duration: September 1971-July 1974.

Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare; Title I Project for Neglected or Delinquent Children.

Publications: Copies of the study are available from the investigators.

32-JB-3 FAMILY PROJECT

Investigator(s): Eliot H. Rodnick, Ph.D., Professor; and Michael J. Goldstein, Ph.D., Professor, Family Project Office, Department of Psychology, University of California at Los Angeles, 1347 Franz Hall, 405 Hilgard, Los Angeles, California 90024.

Purpose: To study and identify patterns of familial interactions and correlated behavioral components, to identify behaviors that predict adult psychopathology, and to devise methods of intervention differentially effective for the various types of disburbances found in the sample of disturbed adolescents and their families.
Subjects: 37 boys and 28 girls, ages 13 to 19, referred to a psychological clinic because of various disturbances: antisocial behavior, active conflict with parents, passive-aggressive behavior, poor school performance, passive-withdrawn behavior, and asociality.
Methods: Families were assigned to one of four nosological groups defined empirically by the behaviors of the adolescent. The groups are compared on data obtained during a series of assessment sessions. Data are collected through psychological tests results, responses to standardized interviews, psychophysiological measurements, structured and nonstructured nonverbal interactions of family members, and responses to videotape recordings of family interactions.
Findings: The family groups were found to differ systematically in the ways family members communicate with each other, in the techniques they use when attempting to influence and control one another, in their concern with kinship relationships, and in their psychophysiological responsivity during stressful interactions.
Duration: 1965-continuing.
Cooperating group(s): National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Alkire *et al.* Social influence and counterinfluence within families of four types of disturbed adolescents. *Journal of Abnormal Psychology*, 1971, 77, 32-41; Goldstein, M. J. *et al.* Interpersonal themes in the TAT stories of families of disturbed adolescents. *Journal of Nervous and Mental Disease*, 1970, 150, 354-365; Goldstein, M. J. *et al.* Galvanic skin reactivity among family groups containing disturbed adolescents. *Journal of Abnormal Psychology*, 1970, 75, 57-67; Goldstein, M. J. *et al.* A method for studying social influence and coping patterns within families of disturbed adolescents. *Journal of Nervous and Mental Disease*, 1968, 147, 233-251; McPherson, S. Communication of intents among parents and their disturbed adolescent child. *Journal of Abnormal Psychology*, 1970, 76, 98-105.

32-JB-4 DEVELOPMENT OF A SELF-CONCEPT INVENTORY FOR JUNIOR AND SENIOR HIGH SCHOOL EDUCABLE MENTALLY RETARDED STUDENTS

Investigator(s): Marlys M. Mitchell, Ph.D., Assistant Professor, Department of Special Education, University of North Carolina, 121 Peabody Hall, Chapel Hill, North Carolina 27514.
Purpose: To develop and evaluate a self-concept inventory to use with retarded children who have limited reading ability and limited self-appraisal skills.
Subjects: 20 junior and senior high school boys and girls who have been diagnosed as educable mentally retarded and who receive special instruction in school; and 100 normal children in second and third grade.
Methods: The students were asked to name at least 10 things which were important to them. These items were inspected and developed into an 88-item scale. The scale was administered with responses designated as (1) important, (2) somewhat important, and (3) not important. Items receiving an important rating by less than 20 percent of the subjects were deleted. A resulting 55-item scale was administered to the children. The Pictorial Self-Concept Scale (PSC) will be readministered to the retarded and normal children after 2 weeks and scored by student teachers. The reliability and validity of the instrument will be determined through an item Q-sort and test-retest correlations.
Duration: Spring 1972-spring 1974.

Cooperating group(s): Smith Fund for Research, University of North Carolina.
Publications: Information on the study is available from the investigator.

32-JC-1 ANALYSIS OF CONTROLLING STIMULI IN DISCRIMINATED IMITATION

Investigator(s): Rodger K. Bufford, Ph.D., Assistant Professor, Department of Psychology, The American University, Washington, D. C. 20016.
Purpose: To demonstrate experimental control of discriminated imitation, and to analyze stimuli controlling differential performance of retarded and emotionally disturbed children.
Subjects: Four retarded and/or emotionally disturbed boys, ages 7 to 10.
Methods: A single-subject design has been employed. Following a demonstration of control over imitation under one light stimulus (ABAB design) and button pressing under control of a second light; a probe technique will be employed to assess the roles of light stimuli, type of imitative response, and timing in the control of generalized (nonreinforced) imitation.
Findings: Results indicate that experimental control over imitation and button press can be established. A reversal procedure followed by a return to baseline produced the typical effects found with nonimitative behaviors.
Duration: June 1972-January 1973.
Cooperating group(s): School for Contemporary Education, McLean, Virginia.

32-JC-2 SUMMER CAMP EVALUATION, 1972

Investigator(s): Arthur L. Wolfe, M.A., Director, Evaluation Project, Convalescent Hospital for Children, 2075 Scottsville Road, Rochester, New York 14623.
Purpose: To evaluate the impact of a therapeutic summer camp on disturbed children's behavior as seen by their parents and teachers.
Subjects: 52 boys, ages 6 to 12; and 13 girls, ages 7 to 10. Most children are acting out; some are withdrawn.
Methods: A pre-post design will use parents' and teachers' ratings of the children's behavior on the Devereux Rating Scales (Devereux Child Behavior, for parents; Devereux Elementary School Behavior, for teachers). Control children were drawn from an outpatient clinic but were not comparable to the camp group on sex or race. The control group was made up almost entirely of white boys. Data were analyzed by means of analyses of variance.
Findings: As seen by parents and teachers, the camp group did not improve significantly more than the control group. Both groups, however, improved significantly between times of testing measured by most of the factors of the scales.
Duration: May 1972-October 1972.
Cooperating group(s): National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Copies of the study are available from the investigator.

32-JD-1 LONG-TERM RESULTS OF MEDICATION TO CONTROL ENURESIS

Investigator(s): Francis Enos, Ph.D., Director; George Dee, Ph.D.; and Paul Bindleglas, M.D., Wayland Child Center, 1937 West Jefferson, Phoenix, Arizona 85009.
Purpose: To examine the results of a study which used emprimamine hydrochlorate to control enuresis in children.

Subjects: 44 boys and girls, ages 11 to 18.
Methods: Questionnaires were distributed and clinical interviews were conducted to determine the effects on both the physical and psychological level of drying up or not drying up. A study will be made to examine the possible side effects of the medication.
Duration: 1965-continuing.
Cooperating group(s): Geigy-Ciba Pharmaceuticals.

32-JE-1 SENSORY PERCEPTION OF PSYCHOTIC CHILDREN

Investigator(s): Mucella Ormanli, Ph.D., Assistant Professor, Department of Experimental Psychology, Istanbul University, Istanbul, Turkey; and Peter Cormack, Ph.D., Coordinator of Psychological Services, Convalescent Hospital for Children, 2075 Scottsville Road, Rochester, New York 14623.
Purpose: To examine psychotic children in regard to perception, especially illusion.
Subjects: 30 psychotic children, ages 8 to 13, equally divided by sex; and a control group of 60 normal children, ages 8 to 13, equally divided by sex.
Methods: Data will be collected from the Convalescent Hospital for Children, Rochester, New York for the psychotic children; and from Rochester elementary schools for the normal children. Research instruments will include the Muller-Lyer Illusion Test, Trial Making Test, and the Bender Gestalt Test. IQ will be controlled, and the experimental and control groups will be compared in terms of the results of the three tests by using a t-test.
Duration: December 1972-April 1973.
Cooperating group(s): Wheatland-Chili Central School, Rochester, New York.

32-JE-2 8-YEAR FOLLOW-UP OF AUTISTIC CHILDREN

Investigator(s): Victor Lotter, Ph.D., Assistant Professor, Department of Psychology, University of Guelph, Guelph, Ontario, Canada.
Purpose: To follow up a cohort of autistic children who were first described when they were 8 to 10 years old.
Subjects: A group of autistic children, presently ages 16 to 18.
Methods: Interviews were conducted with the children and their families. Other data were collected through medical and administrative records.
Duration: 1971-1972.
Cooperating group(s): National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Articles in: *Social Psychiatry*, 1966, 1(3), 124-137; *Social Psychiatry*, 1967, 1(4), 163-173; *British Medical Journal*, 1967, 3, 389-392.

32-JH-1 PILOT PROJECT USING BEHAVIOR MODIFICATION TECHNIQUES

Investigator(s): Leah Abrahams, M.A., Research Analyst; and Carol Albrecht Adams, M.S.W., Social Worker, Brown County Guidance Clinic, Mahon Avenue, Green Bay, Wisconsin 54301.
Purpose: To evaluate the effectiveness of behavior modification therapy compared to traditional therapy for specific types of presenting problems.
Subjects: Six boys with problems of social maladjustment with their peers, in school and at home.

Methods: The boys were divided into three groups: Group I received behavior modification at weekly sessions, Group II received traditional individual therapy, and Group III received traditional group activity therapy. Research instruments included behavioral checklists completed by parents both before and after therapy, therapists' evaluations, and frequency of target behaviors as charted by parents and the children.
Duration: 1972-1973.

32-JH-2 EFFECTS OF AMPHETAMINES ON CHILDREN

Investigator(s): Enoch Callaway, M.D., Chief of Research, Langley Porter Neuropsychiatric Institute, 401 Parnassus Avenue, San Francisco, California 94122.
Purpose: To develop electroencephalographic evoked potential (EP) procedures to assist (1) in determining the effects of amphetamines on attention behavior, and (2) in predicting response to stimulant medication by children with minimal brain dysfunction (MBD).
Subjects: Eight neurologically normal boys, age 8, with normal IQs, who are diagnosed as hyperkinetic.
Methods: The children are tested before treatment with EP measures of attention both with and without drugs. Subsequent response to medication is followed, and an attempt will be made to relate response to drug in the test situation to eventual clinical response.
Findings: Preliminary results indicate that amphetamine increases the *instruction to attend* effects on EP and does so more in the MBD children who evince good therapeutic response to stimulant medication.
Duration: September 1972-August 1975.
Cooperating group(s): Kaiser Permanente Medical Group, Oakland, California; National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Callaway, E. and Halliday, R. A. Evoked potential variability: Effect of age, amplitude and methods of measurement. *Electroencephalography and Clinical Neurology* (in press).

32-JH-3 TREATMENT OF CHILDREN WITH FUNCTIONAL BEHAVIORAL DISORDERS

Investigator(s): Alberto DiMascio, Ph.D., Director, Psychopharmacology, Department of Mental Health of Massachusetts, 74 Fenwood Road, Boston, Massachusetts 02115.
Purpose: To evaluate the effects of various drugs on children who exhibit functional behavioral disorders.
Subjects: 160 boys, ages 6 to 12, with functional behavioral disorders.
Methods: A double blind study will be conducted with each child assigned to one of four treatment conditions. The children will receive a medical, neurological, psychiatric, and psychological evaluation with two follow-ups at 6-month intervals. Teachers and parents will be asked to rate the children at each of the times of testing. The children will be assigned to groups according to the levels of symptomatology shown.
Duration: September 1972-September 1974.
Cooperating group(s): Boston State Hospital, Massachusetts; National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

32-JI-1 THE RELATIVE EFFICACY OF VARIOUS FORMS OF REMEDIAL TUTORING IN READING WITH EMOTIONALLY DISTURBED CHILDREN

Investigator(s): A. J. Finch, Jr., Ph.D., Coordinator of Research; and Sue Kemp, M.Ed., Director of Education, Virginia Treatment Center for Children, Box 1-L, Richmond, Virginia 23201.

Purpose: To study the comparative effects of three methods of tutoring emotionally disturbed children who have reading difficulties.

Subjects: 16 emotionally disturbed children who are 2 academic years behind in reading (Peabody Individual Achievement Test) and are inpatients at the Virginia Treatment Center for Children.

Methods: Traditional tutoring procedures, programmed instruction, and program instruction plus behavior modification will be compared with a control group that does not receive special tutoring. The children were equally divided into four groups: Group 1, a control group, will receive no tutoring but will be enrolled in special education classes at the center; Group 2, a traditional tutoring group, will receive 1/2 hour per school day of individual tutoring in addition to special education classes; Group 3, a program instruction group, will receive 1/2 hour per school day of individual tutoring with programmed instruction; and in Group 4, a programmed instruction plus behavior modification group, each child will receive behavior contracts and reinforcement. Each group will be tested twice at 3-month intervals on the Peabody Individual Achievement Test, and the results will be analyzed on individual as well as group bases.

Duration: September 1972-June 1973.

32-JI-2 DIAGNOSTIC AND PRESCRIPTIVE COGNITIVE LINGUISTIC INSTRUCTION OF EMOTIONALLY DISTURBED CHILDREN

Investigator(s): Patricia Howie, M.A., Director of Education; and I. Louis Young, Ph.D., Psychologist, Convalescent Hospital for Children, 2075 Scottsville Road, Rochester, New York 14623.

Purpose: To prescribe learning sequences for disturbed children which are designed to maximize potential and overcome specific weaknesses diagnosed through formal and informal assessment techniques; and to develop professional competency in diagnostic prescriptive techniques of teacher, school psychologist, and paraprofessional in the area of cognitive-linguistic development.

Subjects: 66 severely disturbed children, ages 6 to 14, who are receiving intensive services of day treatment or residential treatment at the Convalescent Hospital for Children, Rochester, New York.

Methods: Through an ongoing process of inservice education, multidisciplinary teams consisting of psychologists, caseworkers, teachers, language instruction coordinators, and sociotherapists (paraprofessional child care workers) will evaluate individual capacities and disabilities. The teams will prescribe learning sequences to advance the cognitive-linguistic abilities of educationally retarded, emotionally disturbed children of average or above ability in a community mental health center school. Learning sequences use several multimodalic instructional media which are prescribed according to an individual student's learning style. Evaluation of the project is ongoing and longitudinal; using objective, subjective, and projective tools and evaluating learner objectives and staff development objectives. Specific attention is given to cases where a discrepancy of over 2 years exists between high manual expression and low verbal expression. Instruction models of LaFleure, Torrence, and Austin are used in efforts to advance verbal expressive abilities.

Duration: September 1971-July 1974.

Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare; Title I Project for Neglected or Delinquent Children.
Publications: Copies of the study are available from the investigators.

32-JI-3 DEVELOPMENT OF A BASELINE FOR AN ED/MR TOKEN ECONOMY

Investigator(s): Michael R. Petronko, Ph.D., Chief Psychologist; William A. Gradwell, Ph.D., Supervising Clinical Psychologist; and Daniel E. Stevens, M.A., Staff Psychologist, The Training School Unit, American Institute for Mental Studies, 1667 Landis Avenue, Vineland, New Jersey 08360.
Purpose: To determine the need for a relevant baseline for token economies, to develop a correlation between pre- and posttreatment environments, and to examine the use of the baseline as a personality index.
Subjects: Seven male students, ages 12 to 16, most of whom are diagnosed as having disturbances manifested by behavior reactions, secondary mental retardation, and mild to dull normal intelligence. The children are not psychotic and have no physical or sensory handicaps. They have been institutionalized for several years without improvement.
Methods: A revision of the Location-Activity Inventory (LAI) was developed as an objective behavior index, and the baseline was taken in an environment specially designed to emulate the hypothesized terminal environment (e.g., home, community). The children's degrees of self-determination was examined. The LAI revision data will be examined as a behavioral description of personality. Correlations will be made between scores on the revised LAI and the Rorschach, the Thematic Apperception Test, and the Minnesota Multiphasic Personality Inventory.
Findings: The baseline environment appeared to expose problem areas that were apparently repressed by the more usual institutional environment.
Duration: September 1972-June 1973.

32-JI-4 ACADEMIC FUNCTIONING OF EMOTIONALLY DISTURBED CHILDREN IN A SELF-CONTAINED VERSUS AN OPEN CLASSROOM SETTING

Investigator(s): Patricia Howie, M.A., Director of Education; and I. Louis Young, Ph.D., Psychologist, Convalescent Hospital for Children, 2075 Scottsville Road, Rochester, New York 14623.
Purpose: To compare the effectiveness of two methods of teaching emotionally disturbed children within a day treatment program.
Subjects: 12 children: 10 boys and 2 girls, ages 7-0 to 9-6, diagnosed as psychotic or borderline psychotic.
Methods: Half of the children attended the Convalescent Hospital for Children in self-contained classrooms (SCC), while the other half attended heterogeneous multiage classrooms (HMC) in the day treatment program. Each child in the SCC group was matched with a child in the HMC group for age, sex, degree of diagnosed pathology, and the amount of time spent in treatment. The Illinois Test of Psycholinguistic Ability (ITPA) and the Wechsler Intelligence Scale for Children (WISC) were administered to both groups at the beginning of the program and 6 months later.
Findings: Significant increases were found in psycholinguistic age (as measured by the ITPA) and IQ scores (WISC) for both groups from the first to the second testing. The SCC group was found to increase significantly on the ITPA in the areas of visual memory, auditory association, and auditory memory. Overall differences between the two groups were, in general, unremarkable.
Duration: September 1971-March 1972.

Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare; Title I Project for Neglected or Delinquent Children.
Publications: Results of the study are available from the investigators.

Juvenile Delinquency

32-KD-1 HIDDEN DELINQUENCY AND SELECTION MECHANISMS

Investigator(s): J. Junger-Tas, Ph.D., Scientific Collaborator, Centre d'Etude de la Delinquance Juvenile, 44, Avenue Jeanne, 1050 Brussels, Belgium.
Purpose: To determine the extent of hidden delinquency in a normal population of adolescents; to analyze the selection mechanisms of the penal system; to determine the extent of unofficial prevention; and to study the relation of delinquency variables with family, school, and leisure variables.
Subjects: A representative sample of boys and girls, ages 15 to 18, in a community in Brussels, Belgium.
Methods: Trained interviewers conducted interviews using a highly structured questionnaire. Data will be analyzed by computer,
Duration: 1973-1975.
Publications: Results of the study will be available from the investigator.

32-KF-1 INTERVENTION IN LOW BASE RATE ASOCIAL BEHAVIORS

Investigator(s): Gerald Patterson, Ph.D., Research Associate; John Reid, Ph.D., Research Associate; and Joseph Cobb, Ph.D., Research Associate, Oregon Research Institute, 1009 Patterson Street, Eugene, Oregon 97403.
Purpose: To develop new assessment and modification techniques for boys who steal.
Subjects: For comparison of normals, stealers, and nonstealers, the subjects were from 54 families studied at Oregon Research Institute between 1967 and 1971. Treated families (N=27): Each of the families was referred for treatment because at least one male child was reported to be exhibiting high rates of aggressive behavior. The boys were ages 5 to 12; approximately half of them were stealers. Control families (N=27): The families were matched with the treatment families on relevant demographic variables (e.g., age of referred child, number of siblings, SES). The boys in these families were not considered by the parents to have adjustment problems.
Methods: Intervention procedures focused on training the parents of the boys who steal in contingency management techniques. An attempt has been made to develop multiple criterion measures (e.g., observation data, event sampling data, parent report data) to estimate changes in rates of stealing and to assess changes in family structure resulting from treatment. An examination was made of the general patterns of social interaction in the families of normal boys, stealers, and nonstealers. Systematic observations were made by professional observers of the family interaction at home. Data were analyzed through analysis of variance.
Findings: A dramatic difference was found in the effectiveness of treatment for the stealers compared to the nonstealers. Over 80 percent of the nonstealers reduced their deviant behavior by 30 percent or more, while approximately 40 percent of the stealers reached the same level of success after treatment. The analysis of family interaction pat-

terns for normals, stealers, and nonstealers showed (1) mothers of normals emitted the highest rates of positive social behaviors, mothers of stealers emitted the least, and mothers of nonstealers fell in between; (2) mothers of normals emitted more controlling behaviors relative to child deviant behavior than mothers in either treatment group; (3) fathers exhibited lower rates of both controlling and positive behaviors than mothers across all three groups; and (4) stealers produced significantly less deviant and positive behavior than did nonstealers.

Duration: September 1971-September 1974.

Cooperating group(s): National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

Publications: Several papers appear in F. W. Clark and L. Hammerlynck (Eds.), *Critical issues in research and practice*. Champaign, Illinois: Research Press, 1972.

32-KH-1 AN EXAMINATION OF SOME PERSONALITY AND BEHAVIORAL CHARACTERISTICS OF INSTITUTIONALIZED DELINQUENT DRUG USERS AND NONUSERS

Investigator(s): Howard E. Tupker, M.A., Chief Psychologist, Iowa Training School for Boys, Eldora, Iowa 50627; and John D. Schoell, M.S., Psychologist, Oklahoma State Department of Health, Lawton, Oklahoma 73501.

Purpose: To investigate the differences between drug users and nonusers with respect to personality and selected other characteristics.

Subjects: 15 boys who had used drugs and 35 who had no history of drug use, selected from a sample of 78 boys committed to a state institution for delinquent adolescent-age boys.

Methods: The boys were tested on the Jesness Inventory, the Minnesota Multiphasic Personality Inventory, and the Tennessee Self-Concept Scale. Data were collected on the number of their offenses, IQ, age, and gradepoint average. Comparisons between the two groups were made using 33 variables. Data were analyzed through analysis of variance with a covariance adjustment for age.

Findings: Although the drug users were distinguishable from the nonusers on some relevant personality and behavioral measures, they did not stand out predominantly as a distinct group within the delinquent population. Significant differences were found on 7 of the 33 variables. The drug users evinced a greater degree of estrangement from family and society.

Duration: May 1970-completed.

32-KJ-1 CAMBRIDGE STUDY IN DELINQUENT DEVELOPMENT

Investigator(s): D. J. West, M.D., Ph.D.; and D. P. Farrington, Ph.D., Senior Research Officer, Cambridge Institute of Criminology, 7, West Road, Cambridge CB3 9DT, England.

Purpose: To conduct a longitudinal study of the development of delinquency in a normal group of boys.

Subjects: 411 boys who were originally studied in 1962 when they were ages 8 to 9 and comprised whole classes in six adjacent schools in a working class area of London, England.

Methods: Personal contacts have been maintained with the boys for more than 10 years. They have been regularly interviewed and given psychological tests including Raven's Matrices Test, Porteus Maze Test, New Junior Maudsley Inventory, and a peer rating.

Their parents were regularly interviewed by social workers during the first 7 years of the survey. All the data have been compared with official records of delinquency.

Findings: 84 boys became delinquents as juveniles (i.e., between ages 10 and 17). These boys differed from the other boys at ages 8 to 10 in the following ways: they came from larger, poorer families, their parents more often had criminal records, they had a worse family environment (parental attitude, discipline, harmony), and they had lower IQ scores. Teachers were the best predictors of delinquency.

Duration: 1961-1976.

Cooperating group(s): Home Office, England.

Publications: West, D. J. *Present conduct and future delinquency*. London: Heinemann, 1969; West, D. J. and Farrington, D. P. *Who becomes delinquent?* (provisional title). London: Heinemann (scheduled for late 1973).

32-KK-1 COOPERATIVE BEHAVIOR DEMONSTRATION PROJECT

Investigator(s): Carl F. Jesness, Ph.D., Senior Behavioral Research Analyst, Cooperative Behavior Demonstration Project, California Youth Authority, NRCC-3001 Ramona Avenue, Sacramento, California 95826.

Purpose: To reduce the incidence of delinquent behavior in a community.

Subjects: Approximately 600 probationers and parolees, ages 10 to 20, from six counties in northern California.

Methods: The aims of the study are (1) to develop an effective training package that teaches behavior modification, (2) to train parole agents and probation officers in the application of these principles, (3) to develop alternative treatment strategies based on these principles, (4) to evaluate the strategies applied with different types of offenders, and (5) to produce basic information for decision makers throughout the field of corrections. A variety of single subject designs will be used. Reversal periods and multiple baseline procedures will be employed. Outcomes will also be compared with control children who are not treated by behavior modification techniques.

Duration: April 1972-March 1975.

Cooperating group(s): California Council on Criminal Justice.

Corrections

32-KP-1 JUVENILE PAROLE PREDICTION STUDY

Investigator(s): Christopher Baird, M.A., Research Scientist; and Donald Wintersteen, B.A., Research Analyst, Division of Research and Long-Range Planning, Illinois Department of Corrections, P. O. Box 736, Joliet, Illinois 60434.

Purpose: To identify and measure the impact of socioeconomic and psychological factors and institutional efforts at rehabilitation on the success of parolees.

Subjects: Approximately 1,400 male juveniles, ages 12 to 17, who were initially committed to the Illinois Youth Commission in 1967.

Methods: The primary sources of data are juvenile records of the Juvenile Division, Illinois Department of Corrections. The records include data on intelligence and achievement test results, psychological and psychiatric evaluations, social histories, and institutional adjustment reports. Data will be analyzed through multiple regression and discriminant analyses.

Findings: The number of offenses committed by the youth prior to his initial incarceration and his age at the time of commitment are highly significant predictors of later parole success. The equation derived from the discriminant analysis had a prediction success rate of 80 percent.

Duration: September 1972-March 1973

Publications: Copies of *Juvenile parole prediction: Report No. 1* are available from: Illinois Department of Corrections, Division of Research and Long-Range Planning, P. O. Box 736, Joliet, Illinois 60434.

32-KP-2 GROUP PROBATION PROJECT

Investigator(s): Leonard Rutman, M.S.W., Ph.D., Teacher, University of Manitoba, Winnipeg, Manitoba, Canada; and Kathryn V. Ryerson, N.S.W., Group Probation Project Coordinator, Juvenile Division, Hennepin County, Department of Court Services, 915 South Fifth Street, Minneapolis, Minnesota 55415.

Purpose: To demonstrate the efficacy of a group method as an approach to handle caseloads of juvenile delinquents; to train a staff to implement the program; to develop a research design to measure changes in juvenile self-concept and behavior; to develop and use community resources for group activities and as settings for treatment groups; and to involve the family in planning, goal setting, and family groups.

Subjects: 250 to 300 juveniles, ages 18 and under, placed under the supervision of the juvenile division of a county court system during the first year of the study.

Methods: Instruments used to measure the effectiveness of the program will include school behavior, official police records, official court referrals and dispositions, the nature and number of new offense dispositions, and self-concept scales. Adherence to the group work methods taught will be measured through videotapes of the group activities. The group leaders will evaluate each group meeting and identify each group member's position and role in the group. As each group member leaves the group, he will evaluate his experience in the group on a checklist. Control caseloads will use all the measurement tools except those specifically designed for the group experience.

Duration: March 1972-February 1975.

Cooperating group(s): Governor's Commission on Crime and Delinquency Prevention and Control, Minnesota.

THE CHILD IN THE FAMILY

Family Relations

32-LA-1 STUDY OF FAMILY AND PEER RELATIONSHIPS AS THEY AFFECT IDENTITY AND INTERDEPENDENCE OF 5-YEAR-OLD CHILDREN IN GROUP DAY CARE CENTERS

Investigator(s): Jacob G. Wiener, M.S.W., Training Specialist, Special Services for Children, City Department of Social Services, 80 Lafayette Street, 15th Floor, New York, New York 10013.

Purpose: To determine the extent to which children's adjustment to peers in group day care centers is influenced by their experiences in their homes, and to determine the degree to which the child reacts to parents' and peers' influences with respect to his development of identity and interdependence.

Subjects: 84 children, age 5, who have attended day care centers in the Bronx for at least 2 years.

Methods: A three-part questionnaire and a two-part semistructured interview were constructed. Data were collected over a 2-year period of day care experience on home factors, parental attitudes, the adjustment of the child to other children at the center, and the interrelationships which affect the development of identity and interdependence.

Findings: A positive relationship was found between home atmosphere and the development of peer relationships.

Duration: 1971-1973.

Cooperating group(s): Division of Day Care, Bureau of Child Welfare.

Publications: Copies of the study are available from: Human Development and Social Relations Program, Graduate School of Education, New York University, New York, New York 10003.

32-LA-2 NEWBORN EVALUATION AND EARLY MOTHER-CHILD INTERACTION

Investigator(s): Joy D. Osofsky, Ph.D., Assistant Professor. Department of Psychology, Temple University, Philadelphia, Pennsylvania 19122.

Purpose: To determine the relationship between infant behaviors, the mother's attitudes towards and perceptions of her infant, and the mother-infant interactions.

Subjects: 51 male and female newborns and their mothers.

Methods: Newborns were evaluated at 3 days of age using the Brazelton Scales for Neonatal Assessment. Mothers and infants were observed in the hospital during feeding. The mothers were interviewed extensively on their perceptions of their infants and their attitudes towards childrearing. An attempt will be made to determine the predictive behaviors and the interactions from the time of birth.

Duration: January 1972-continuing

Cooperating group(s): Health Sciences Center, Temple University; Department of Obstetrics and Gynecology and Department of Pediatrics, Temple University.

32-LA-3 BEHAVIOR INTERVENTIONS MEDIATED BY FAMILY MEMBERS

Investigator(s): Dorothy Tennov, Ph.D., Associate Professor, Department of Psychology, University of Bridgeport, Bridgeport, Connecticut 06602.

Purpose: To explore the effects of positive interaction cycles initiated by the improved behavior of one or more children in the family, and to investigate the use of children as behavior mediators within their own family.

Subjects: 37 children, ages infancy to adolescence, from 15 families from lower middle to upper middle class groups.

Methods: Cases from private consultation practice and from clinic practice will be studied.

Findings: Positive cycles were found to readily follow from almost any improvement in the children's home behavior. It was suggested that supervision and consultation during the intervention must be close and active.

Duration: Spring 1972-spring 1974.

Cooperating group(s): Norwalk Children's Center, Norwalk, Connecticut; Compact Studies, Westport, Connecticut.

32-LC-1 STEPFATHERS AND THE MENTAL HEALTH OF THEIR CHILDREN

Investigator(s): Louis A. Zurcher, Jr., Ph.D., Research Associate, Western Behavioral Sciences Institute, 1150 Silverado Street, La Jolla, California 92037. Address correspondence to: Department of Sociology, University of Texas, Austin, Texas 78712.

Purpose: To analyze the family structure, processes, and role interactions in stepfather families; and to determine the association of the processes and patterns with the mental health of the child.

Subjects: 2,000 randomly sampled families. Stepfather families, mother-headed families, and natural parent families were identified and studied.

Methods: A random stratified procedure was employed. Doorstep interviews with 2,000 families were conducted. Intensive case histories were collected on 20 stepfather families, 20 mother-headed families, and 20 natural parent families to develop a survey research instrument. The instrument was administered to matched groups of 150 stepfather families, 150 mother-headed families, and natural parent families. A modified form of the University of Michigan Survey Research Center Omnibus Survey was used to determine the number of stepfather families in the United States and to determine selected characteristics of the families. Intensive case histories were collected and questionnaires were administered to 50 stepfather families identified through marriage records to determine the validity of the survey research procedure and to test counseling techniques for stepfather families.

Duration: September 1972-September 1975.

Cooperating group(s): Juvenile Problems Research Review Committee, Applied Research Branch, National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

32-LD-1 THE QUESTION/ANSWER EXCHANGE BETWEEN MOTHERS AND CHILDREN

Investigator(s): W. P. Robinson, Ph.D., Senior Lecturer; and J. Arnold, B.Sc., Department of Psychology, University of Southampton, Southampton, England.

Purpose: To establish associations between maternal behavior and the frequency, focus, and type of children's questioning and answering, both in terms of social class and the social-psychological level.

Subjects: 40 middle and lower class mothers; and their children, age 6, who are equally divided by sex and have approximately the same IQ.

Methods: Mother-child pairs were presented with five sets of stimulus objects, and the children talked and asked their mothers questions about the objects. The data were then compared with precedents to arrive at categories of behavior.

Findings: Social class differences were found: middle class children asked more complex and varied questions, gave more appropriate answers, and made more statements; middle class mothers provided more cognitive meaning, gave more encouraging feedback, used more correctional remarks, and asked more questions of their children.

Duration: 1971-1973.

Publications: Copies of the report are available from: Social Science Research Council, State House, High, Holborn, London WC1R 4TH England.

32-LF-1

AFFECTIVE AND NONVERBAL BEHAVIOR AS CORRELATES OF MOTHER'S EMPATHIC RESPONSES TO HER CHILD DURING THERAPY

Investigator(s): William J. DiScipio, Ph.D., Research Director; Marilyn Wood, M.A., Psychologist; and Sally Spielvogel, M.A., Psychologist, PACE Family Center, Bronx State Hospital, 1500 Waters Place, Bronx, New York 10461.

Purpose: To investigate the effects of a short-term course of treatment on the empathic response towards the children of a group of severely disturbed mothers through the use of videotape playbacks.

Subjects: 10 severely disturbed mothers, ages 25 to 35; and their preschool children.

Methods: The mothers were rated before and after treatment on three nonverbal measures (head orientation, angle of upper trunk, and physical distance between mother and child) and one nonverbal measure of empathic response. During a 15-minute play session, the mother's nonverbal responses were recorded by videotape, and two experts rated her verbal responses on an adjective checklist of emotions. The verbal measure of empathic response was the difference between the mother's ratings of her child's emotions during the play session and the ratings of the observers.

Duration: September 1972-September 1973.

32-LG-1

LONG-TERM FOLLOW-UP ON KIDNEY TRANSPLANT PATIENTS AND THEIR FAMILIES

Investigator(s): Barbara M. Korsch, M.D., Professor, Department of Pediatrics; and Vida Francis Negrete, P.H.N., M.S., Coordinator, Dialysis and Transplant Program, Children's Hospital of Los Angeles, 4650 Sunset Boulevard, Los Angeles, California 90027.

Purpose: To provide objective data on the financial, ethical, and psychological aspects of kidney transplantation in childhood; and to advance methodology for the psychosocial study of sick children.

Subjects: 35 children, ages 3 to 22, who have a functioning kidney 1 to 5 years after having a kidney transplant.

Methods: An interdisciplinary team assessed transplant recipients and their families through standardized interviews with the child and his family, activity lists, the California Test of Personality (CTP), Sarason Anxiety Scale, the Self-Esteem Inventory, and the Draw-A-Person Test. Clinicians compared the scores obtained from these tests to global ratings. (See *Research Relating to Children, Bulletin 25*, 1970, 41.)

Findings: On the CTP, the experimental group did not significantly differ from a matched healthy control group. Low scores were more frequent in social than in personality adjustment, while self-esteem tended to be low compared to normal controls. Anxiety ratings were generally high; the greatest illness-related worry for the child was fear of kidney rejection. Parents' fears of kidney rejection, emotional problems, obesity, and finances ranked next. Future concerns focused on employment barriers.

Duration: December 1971-continuing.

Cooperating group(s): School of Medicine, University of Rochester, New York; Cystic Fibrosis Center, Children's Hospital of Los Angeles.

32-LG-2 THE EFFECTS OF HOSPITALIZATION ON THE COPING BEHAVIOR OF CHILDREN

Investigator(s): Marion H. Rose, Ph.D., Director, Family-Child Nursing Program, College of Nursing, Arizona State University, Tempe, Arizona 85281.

Purpose: To investigate how children cope with the experience of hospitalization.

Subjects: Six Black and eight white children: seven boys and seven girls, ages 18 months to 7 years, who were admitted to the pediatric unit of a large metropolitan hospital for surgical procedure or for a cardiac catherization.

Methods: Data were collected by naturalistic observation at home before, during, and after hospitalization. Interviews were conducted with parents before and after hospitalization. The process of coping and the stress of hospitalization were examined. Rhythmicity and flexibility, factors that could influence coping and stress, were studied. Categories for coding the observational data were based on precoping behaviors, active coping, and gratification. Stress of hospitalization was determined by the number of types of procedures and treatments encountered by the child. Three areas of rhythmicity of bodily function were considered: sleep and activity, eating and appetite, and bowel functioning. Each child was ranked on flexibility on the basis of summary statements about his observed behavior.

Findings: The children showed changes during hospitalization, but following hospitalization they reverted back toward their prehospital patterns of behavior. The variables that did not show changes during hospitalization tended to remain about the same from prehospital, to hospital, to posthospital periods. Results indicated that children who do not return to their prehospital pattern of behavior following hospitalization (1) did not experience a greater number of stressful experiences during hospitalization than children who showed a high congruence between prehospital and posthospital behavior, (2) were not highly rhythmic children, (3) were not rated low on flexibility prior to hospitalization, and (4) did not show a combination of these factors.

Duration: February 1970-March 1972.

Publications: Rose, M. H. The effects of hospitalization on the coping behaviors of children. In *Communicating nursing research: The many sources of nursing knowledge.* Boulder, Colorado: Western Interstate Commission for Higher Education, 1972; Rose, M. H. Anne copes with open heart surgery. In E. Anderson *et al. Current concepts in clinical nursing.* Vol. IV. St. Louis: C. V. Mosby, Co. (in press).

32-LG-3 FAMILY VIEWS OF ITS SOCIAL ENVIRONMENT: EFFECTS ON FAMILY THERAPY PROCESS

Investigator(s): David Reiss, M.D., Chief; Ronald Costell, M.D., Clinical Associate; and Loann Drake, Research Assistant, Section on Experimental Group and Family Studies, Adult Psychiatry Branch, National Institute of Mental Health, National Institutes of Health Clinical Center, Building 10, Room 2N210, Bethesda, Maryland 20014.

Purpose: To test the relationship between family reaction patterns and their adaptation during the first 10 weeks of family oriented inpatient treatment of an adolescent.
Subjects: 25 to 30 families including mother, father, a hospitalized nonpsychotic adolescent, and the nearest aged, same sexed sibling.
Methods: A multifactorial design will be employed with family reaction pattern as the independent variable, as determined from laboratory interaction. The dependent variables will include questionnaire measures of ward values and perceptions of ward atmosphere, behavioral procedures regarding interpersonal construct formation and family conceptions of the ward, and observational, sociometric, and cohesiveness measures relevant to family behaviors in a multiple family therapy group.
Duration: July 1972-December 1974.
Cooperating group(s): Section on Personality Development, Adult Psychiatry Branch, National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

32-LH-1 INFORMAL ADOPTION IN BLACK FAMILIES

Investigator(s): Lewis W. Jones, Ph.D., Professor; Norma D. Carson, Instructor; and Gladys Lyles, Instructor, Department of Sociology, Tuskegee Institute, Tuskegee, Alabama 36088.
Purpose: To study the legal, social, and cultural contexts in which informal adoption of Black children by adults other than blood relatives takes place in the rural South.
Subjects: 150 to 300 families residing in rural Alabama which have recently experienced informal adoption.
Methods: Interviews will be conducted with the families.
Duration: August 1972-July 1973.
Cooperating group(s): Office of Child Development, U. S. Department of Health, Education, and Welfare.

Childrearing

32-MA-1 MOTHER-INFANT INTERACTION: EFFECTS OF EARLY DEPRIVATION, PRIOR EXPERIENCE, AND SEX OF INFANT

Investigator(s): P. Herbert Leiderman, M.D., Professor, Department of Psychiatry; Aimee D. Leifer; Marjorie J. Seashore; Rose Grobstein, School of Medicine; and Clifford R. Barnett, Ph.D., Department of Anthropology, Stanford University, Stanford, California 94305.
Purpose: To examine the effects of early deprivation, prior experience, and sex of the infant on mother-infant interaction.
Subjects: 42 mothers and their premature infants (birthweight: from 890 to 1,899 grams), and 24 mothers and their full-term infants. In every case, the mother had no previous history of premature or low birthweight infants, the father was present in the home, the infant was free from obvious congenital abnormalities, and there was not a multiple birth.
Methods: The mothers of the premature infants were randomly assigned to one of two treatment groups: Group 1 consisted of 20 mothers who could view their infants from the hospital nursery window during the 3- to 12-week period that the infant was in the inten-

sive care nursery, but had no other contact with their infants. Group 2 consisted of 22 mothers who were permitted to enter the intensive care nursery to interact (handle, diaper, and feed) with their infants throughout the infant's hospitalization. When the infant reached the weight of 2,100 grams, he was removed from the incubator in the intensive care nursery and transferred to a discharge unit for a period of 7 to 10 days until his weight reached 2,500 grams. During this period, the mothers in both groups were permitted to care for their infants. When the infant reached 2,500 grams, he was discharged to the mother's care at home. The separated and contact phases of the study were alternated in blocks of 3 to 6 months, so that at any point in time all mothers with infants in the nursery had the same experience. The mothers of the full-term infants delivered their infants without complications, bottle-fed them, experienced full sensory contact with their infants during the four or five feedings each day while the infant was in the hospital, and were discharged to their home within 3 days after birth. When possible, the full-term group matched the two premature groups with respect to parity of the mother, sex of the infant, and social class. A mother's confidence in her ability to care for her infant was measured immediately preceeding the infant's discharge from the hospital and 1 month later using a paired comparison questionnaire in which the mother compared herself with five other possible caretakers: father, grandmother, experienced mother, pediatric nurse, and doctor. Comparisons were made for each of six caretaking tasks classified either as social (calming the baby, understanding what the baby wants, and showing affection to the baby) or as instrumental (diapering, feeding, and bathing the baby). Observations were made of selected mother and infant behaviors while the mother held her infant in the home at 1 week postdischarge and in the pediatric clinic at 1 month postdischarge. Infant development was tested at discharge and 3 months later using the Bayley Scales of Mental and Motor Development. Weight was measured at the time of discharge and again at the time of a physical examination 1 month after discharge. Data were analyzed by analysis of variance, regression analysis, and correlational analysis.

Findings: The mothers' behavior with their premature infants was found to differ from the mothers' behavior with their full-term infants. Maternal behavior is influenced by the early separation of the mother and infant, previous experience of the mother with children, and the sex of the infant. Maternal attitudes bear some relationship to the infant's mental development measured at 3 months of age.

Duration: September 1967-June 1972.

Cooperating group(s): Grant Foundation, New York; National Institute of Child Health and Human Development, National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare; National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare; Stanford University Hospital.

32-MB-1 PARENTAL INFLUENCES AFFECTING THE EARLY DEVELOPMENT OF EMPATHIC AWARENESS

Investigator(s): Helene Borke, Ph.D., Assistant Professor, Department of Psychology, Carnegie-Mellon University, Pittsburgh, Pennsylvania 15213.

Purpose: To investigate families of high and low empathy children for differences in parental childrearing attitudes and practices and family interaction patterns.

Subjects: Eight children, ages 3 and 4, who were the four highest and four lowest scorers on measures of empathic awareness among 30 children attending a university child care center.

Methods: The measures of empathic awareness include (1) children's scores on an instrument that measures empathy (developed by the investigator), (2) rankings of the children for social sensitivity by two independent judges on the basis of behavioral observations, and (3) rankings of the children for social sensitivity by two teachers. Parents of the low and high empathy children were interviewed about their childrearing attitudes. Two judges ranked the interviews from one to eight. Rank 1 was assigned to parents of the child the judges felt had the most empathic awareness. Rank 8 was assigned to parents of the child judged to have had the least empathic awareness. These rankings will then be correlated with the combined rankings of the children based on the empathy test, behavioral observations, and teacher observations. Each taped interview will be coded for parental remarks which reflect their attitudes towards childrearing. These comments will be placed on separate cards, and two judges will sort all of the incidents into categories. Critical incidents that describe transitions between parents and their children are obtained from the parents over a 2-week period. On the basis of the incidents provided by each family, two judges will rank the families according to empathic awareness of the child. These rankings will be compared with the combined rankings of the children based on the empathy test, behavioral observations, and teacher observations. Two judges will sort all of the incidents into categories that describe parental intervention. Videotapes will be made of the parents and children interacting in a series of brief tasks (e.g., asking parents to prevent the child from playing with toys stored in a room, asking the parents and child to use a construction set to make something, having the parents help the child learn a new skill). Parent-child interactions will be analyzed using categories of intent previously developed by the principal investigator to describe family interaction (see Publications).

Duration: October 1972-June 1973.

Publications: Borke, H. The communication of intent: A revised procedure for analyzing family interaction from video tapes. *Journal of Marriage and the Family*, 1969, XXI, 541-544.

32-MB-2 CHILDREARING CONTINGENCIES AMONG 2-YEAR-OLD TWINS AND SINGLETONS IN RELATION TO THE DEVELOPMENT OF COMPLIANCE, EMOTIONAL DEPENDENCE, AND INSTRUMENTAL INDEPENDENCE

Investigator(s): Hugh Lytton, Ph.D., Associate Professor; and W. Zwirner, Ph.D., Statistical Consultant, Department of Educational Psychology, University of Calgary, 2920-24th Avenue Northwest, Calgary, Alberta T2N 1N4, Canada.

Purpose: To study the reciprocal interaction between parents and children and its effect on the emergence of compliance, dependence, and independence.

Subjects: 100 twin boys, ages 2 and 3; and 50 singleton boys, ages 2 and 3. Approximately 60 percent of the boys are from the working class, and 40 percent are from the middle class.

Methods: A twin study will be conducted to permit an estimate of the genetic contribution to compliance, dependence, and independence. Naturalistic home observations will be made, mothers will be interviewed, and an experiment will be conducted in a laboratory situation. Data will be analyzed through computer sequence analysis of behavior and trait analysis.

Duration: May 1970-September 1973.

Cooperating group(s): Canada Council.

Publications: Lytton, H. Three approaches to the study of parent-child interaction: Ethological interview and experiment *Journal of Psychology and Psychiatry*, 1973, 14(1), 1-17.

32-MB-3 HELPING SERVICES USED BY ADOPTIVE AND NATURAL PARENTS

Investigator(s): Philip Starr, M.S.W., Research Associate; and Sheryl Breetz, M.A., Research Associate, Child and Family Services of Connecticut, 1680 Albany Avenue, Hartford, Connecticut 06105.

Purpose: To compare the childrearing problems experienced by adoptive and biological parents, and to determine the factors associated with the use of counseling services by the parents.

Subjects: 240 mother-father dyads, half of whom are biological parents and half of whom are adoptive parents of 6- to 12-year-old children.

Methods: Each group of parents will be subdivided according to social class and by their use or nonuse of counseling services. Comparisons will be made between the groups on the basis of the childrearing problems they experience.

Duration: September 1972-August 1974.

Cooperating group(s): Catholic Family Services, Hartford, Connecticut.

32-MB-4 CHILDREARING PRACTICES AND THE DEVELOPMENT OF COMPETENCE

Investigator(s): Burton L. White, Ph.D., Associate Professor, Graduate School of Education, Harvard University, Roy E. Larsen Hall, Appian Way, Cambridge, Massachusetts 02138.

Purpose: To compare the effects of different types of childrearing advice and work with families.

Subjects: 16 families with 5-month-old infants who are physically normal, equally divided by sex, and from middle class backgrounds.

Methods: Instruments will be administered to measure competence in language ability, discriminative ability, abstract ability, social competence, and daily activities. The instruments were developed by the Harvard Preschool Project (see Study 32-AA-18).

Duration: September 1972-August 1975.

Cooperating group(s): Office of Child Development, U. S. Department of Health, Education, and Welfare; Carnegie Corporation.

Publications: White, B. L. *et al. Major influences on the development of the child.* Englewood Cliffs, New Jersey: Prentice-Hall (in press).

32-MC-1 NEW ORLEANS PARENT AND CHILD DEVELOPMENT CENTER

Investigator(s): Gerald Wiener, Ph.D., Professor, School of Public Health, Tulane University, New Orleans, Louisiana 70118.

Purpose: To compare two models of intervention with parents which are designed to affect children's cognitive development.

Subjects: 60 mothers and their 2-month-old infants who are in a center-based program; 25 mothers and their 1-year-old infants who are in a home-based program; and a control group of infants, age 65 months. All families are from poor, inner city Black backgrounds.

Methods: One of the models of parent education involved the use of paraprofessional educators in a center where parents received information on the concepts of family life. The second model used paraprofessional educators who visited mothers at home in order to provide cognitive-developmental education. All mothers and infants were examined and tested every 2 months using the Uzgiris-Hunt Scales and observations of mother-infant interactions. The Bayley Scales of Infant Development were administered to the infants at 2 and 13 months of age. The mothers were administered various scales to measure self-esteem, stress, and literacy.

Findings: Preliminary results do not indicate any programmatic effect upon infant development.

Duration: September 1971-September 1974.
Cooperating group(s): Parent Child Development Centers, Office of Economic Opportunity.

32-MC-2 HOUSTON PARENT-CHILD DEVELOPMENT CENTER

Investigator(s): Dale L. Johnson, Ph.D., Professor; and Hazel Leler, Ph.D., Assistant Professor, Department of Psychology, University of Houston, Houston, Texas 77004.
Purpose: To develop and evaluate a model parent education program for low income Chicano families.
Subjects: 120 Chicano children, ages 1 to 3, and their parents.
Methods: Approximately 120 families enter the program each year and are assigned either to experimental or control groups. The mothers of 1-year-old infants in the experimental group are trained in their homes weekly, and entire families attend family human relations training during the first year. Mothers and their 2-year olds participate in a center program of homemaking, parent education, and a nursery school. Both experimental and control children were administered the Bayley Scales of Infant Development (BSID) and the Stanford-Binet Intelligence Scale (SBIS).
Findings: The experimental children were found to have higher post-training scores than controls on the BSID at age 2 and on the SBIS at age 3. Experimental mothers were rated as being warmer, more autonomous, and granting than the control mothers after the training program.
Duration: 1970-continuing.
Cooperating group(s): Office of Economic Opportunity.

SOCIOECONOMIC AND CULTURAL FACTORS

32-NB-1 5-YEAR EVALUATION OF A COMPENSATORY HIGHER EDUCATION PROGRAM AT THE CLAREMONT COLLEGES

Investigator(s): Eugene S. Mornell, Ph.D., Director; and Sol Jaffe, M.A., Research Assistant, Program of Special Directed Studies, Claremont College, Claremont, California 91711; Patricia Hodges, Ph.D., Assistant Professor, School of Education, California State College at Los Angeles, Los Angeles, California 90032; and Robert Lowman, M.A., Assistant Professor, School of Education, University of Wisconsin at Milwaukee, Milwaukee, Wisconsin 53211.

Purpose: To evaluate successes and failures of a program involving disadvantaged and high risk students attending highly selective elitist colleges, and to develop predictive instruments for such students based on nontraditional criteria.

Subjects: 158 male and female predominantly Chicano and Black students, ages 16 to 28, participating in a compensatory program over a 5-year period, who have specifically defined characteristics of economic disadvantage and high academic risk.

Methods: Data were available for each student on the following measures: high school grades, Scholastic Aptitude Test, Cattell Culture Fair Intelligence Test, Rotter Internal-External Control of Reinforcement Scale, Mooney Problem Check List, Allport-Vernon-Lindzey Study of Values, Remote Associates Test, Barron Personality Checklist, School and College Aptitude Test, and the California Test of Mental Maturity. Interviews and specially developed questionnaires have also been employed. Control groups of regularly admitted minority and nonminority students were tested on the same instruments during the first year of the compensatory program.

Findings: Traditional predictors were found to be invalid for this group of students. Noncognitive factors such as family support, religious values, and certain personality attributes do correlate with success.

Duration: September 1968-June 1973.

Cooperating group(s): Rockefeller Foundation.

Publications: Preliminary reports are available from the investigators.

32-NB-2 THE CONTENT ANALYSIS SCHEDULE FOR BILINGUAL EDUCATION PROGRAMS

Investigator(s): Marietta Saravia Shore, M.A., Coordinator; G. Richard Tucker, Ph.D., Consultant; Mari-Luci Ulibarri, Consultant; and Emilio Rivera, Jr., Ph.D., Consultant, Bilingual Education Applied Research Unit, New York City Consortium on Education, Hunter College Division, P. O. Box 340, 695 Park Avenue, New York, New York 10021.

Purpose: To collect, organize, and categorize the characteristics of 130 Title VII projects operating in their second year.

Subjects: Children, ages 3 to 18, who are from Mexican-American, Puerto Rican, Navajo, Anglo, and other Amerindian backgrounds.

Methods: Data were extracted from Title VII application and continuation documents. The completed Content Analysis Schedule for Bilingual Education Programs was sent to each project office for its corrections, additions, and verification.

Duration: July 1970-June 1973.

Cooperating group(s): Bilingual Programs Branch, Office of Education, U. S. Department of Health, Education, and Welfare.

Publications: Verified Content Analysis Schedules will be available through the ERIC System.

32-NB-3 AN EVALUATION OF THE INDIANA CAREER RESOURCE CENTER

Investigator(s): Steve Huntsburger, Tom Jennings, and Pat Rowe, School of Education, Indiana University at South Bend, 1825 North Side Bouvelard, South Bend, Indiana 46615.
Purpose: To determine the impact of career development services and materials on junior and senior high school students.
Subjects: 778 junior and senior high school students in northern Indiana.
Methods: A questionnaire was designed to gather data on the students' attitudes towards the program. Data were analyzed and reported in terms of frequency responses.
Findings: Most students considered the multimedia information interesting, current, and helpful.
Duration: October 1971-July 1972.
Cooperating group(s): Indiana Vocational Education Division, Department of Public Instruction.
Publications: For additional information, write: Indiana Career Resource Center, 1205 South Greenlawn, South Bend, Indiana 46615.

32-NB-4 VOCATIONAL GUIDANCE PROJECT

Investigator(s): B. M. Moore, M. Sc., A.B.Ps.S., National Foundation for Educational Research in England and Wales, The Mere, Upton Park, Slough, Bucks, SL1, 2DQ, England.
Purpose: To develop noncognitive test instruments to use in educational and vocational guidance.
Subjects: 850 boys and girls in England and Wales, ages 14 1/2 and 15, enrolled in secondary schools.
Methods: Over the last 3 to 5 years in Great Britain there has been rapid growth in educational and vocational guidance and counselling services in secondary schools. In the field of psychological measurement there has been no systematic attempt to support this growth by providing test instruments suitable for use by school counsellors. Following a study of the characteristics and needs of guidance systems in secondary schools, the Foundation is pursuing a fresh approach in the measurement of general and vocational interests — instruments are being developed to assess how pupils make use of career knowledge and information. Existing methods for measuring interests commonly employ forced-choice techniques which, by definition, impose restrictions on the individual's freedom of responding. The method adopted in this study allows the pupil to state his own group of three preferences within a given field of activity before rating a number of set items in relation to them: the first stage acts as an anchor for the second. Ten fields of activity covering educational, vocational, and general pursuits are evaluated. In the individual guidance/counselling situation, there are thus two groups of results to be drawn upon: (1) the material from the anchoring stage, and (2) a profile of interests which can be constructed from responses given in the rating stage. Separate experiments have previously been carried out using 7- and 11-point rating scales and with and without the procedure of setting up anchors. Currently the interest inventory is being validated on the present sample using a 7-point scale.
Duration: January 1971-October 1972.
Publications: Moore, B. M. *Guidance in comprehensive schools — A study of five systems.* Slough: National Foundation for Educational Research, 1970.

32-NB-5 INTELLECTUAL AND SOCIOECONOMIC FACTORS RELATED TO ROTE LEARNING, REASONING, AND ACADEMIC ACHIEVEMENT

Investigator(s): W. W. Grant, M.D., Director; Anne E. Bell, M.A., Psychologist; and Fred Switzer, M.A., Psychologist, Child Development Clinic, Children's Hospital of Winnipeg, 685 Bannatyne Avenue, Winnipeg, Manitoba R3E OW1, Canada; and M. S. Aftanas, Ph.D., Associate Professor, Department of Psychology, University of Manitoba, Winnipeg, Manitoba, Canada.

Purpose: To examine the effects of differing combinations of learning skills and environmental factors on children's reading achievement.

Subjects: 100 first graders, half from middle and half from low socioeconomic groups, matched on age, IQ, and sex. In each group of 50 subjects, 25 children had IQs over 100, and 25 had IQs under 100.

Methods: A battery of psychological tests was administered to all children prior to school entry. The battery included measures of visual and auditory perception, rote memory, visual-motor coordination, reasoning, and general intelligence. Achievement was measured at the end of the first year by means of individual and group tests in reading and mathematics. Data were analyzed using a 2 X 2 factorial analysis of variance and Duncan's range test.

Findings: Children from low socioeconomic groups are not greatly handicapped by the standard intelligence test; performance generally follows IQ lines. Mean scores tend to improve in the direction of socioeconomic class, but within each group on each variable there is a wide range of scoring with considerable overlap. Achievement scores are highly influenced by both IQ and socioeconomic status. There is no evidence that simple and complex skills are differentially distributed at socioeconomic levels. The best reading scores were achieved by children in both socioeconomic areas who were high in both rote and complex skills.

Duration: 1969-continuing.

Cooperating group(s): Department of National Health, Canada; St. Boniface School Board; Winnipeg School Board.

Publications: Copies of the study are available from the investigators.

32-NG-1 CAMP INTERLAKEN RESEARCH PROJECT

Investigator(s): Rod Eglash, M.S.W., Program Director; and Mona Jankins, B.S., Jewish Community Center, 1400 North Prospect Avenue, Milwaukee, Wisconsin 53202.

Purpose: To qualitatively measure the experiential value of a camp program upon the Jewish orientation of the children and counselors.

Subjects: 250 children, ages 11 to 15, equally divided by sex; and 55 counselors, ages 18 to 55, equally divided by sex.

Methods: Data will be collected through a questionnaire which will be sent to all children and counselors. The results will be analyzed by computer.

Duration: October 1972-April 1973.

Cooperating group(s): National Jewish Welfare Board, Chicago.

Publications: Results of the study are available from the Jewish Community Center, 1400 North Prospect Avenue, Milwaukee, Wisconsin 53202.

32-NG-2 ANALYSIS OF ALTERNATIVE SECONDARY SCHOOLS FOR ESKIMO STUDENTS

Investigator(s): J. S. Kleinfeld, Ed.D., Assistant Professor, Department of Educational

Psychology, Institute of Social, Economic and Government Research, University of Alaska, College, Alaska 99701.

Purpose: To determine the psychological structure of successful school environments of Eskimo students.

Subjects: 150 Eskimo students in grade 9.

Methods: An ethnographic study will be conducted of four types of secondary schools. Data will be collected on school dropouts, academic achievement, and the mental health of the students entering the schools during a 2-year period. A follow-up study will be made of the graduates of these schools.

Duration: September 1971-September 1973.

Cooperating group(s): Division of Regional Schools; Boarding Home Program; Alaska State Department of Education.

32-NG-3 THE DEVELOPMENT OF SCHOOL READINESS: A CROSS-CULTURAL STUDY OF MOTHERS, TEACHERS, AND PRESCHOOL CHILDREN IN JAPAN AND THE UNITED STATES

Investigator(s): Robert D. Hess, Ph.D., Professor, School of Education, Stanford University, Stanford, California 94305; and Giyoo H[illegible]no, Ph.D., Professor, Faculty of Education, University of Tokyo, Tokyo, Japan.

Purpose: To study the relationships between home environment and maternal interaction styles and school readiness of preschool children in Japan and the United States, and to compare the interaction styles and educational philosophies of preschool teachers with those of mothers.

Subjects: 60 Japanese and 60 American children followed from age 3-8 to 5-8, equally divided by sex, from various socioeconomic backgrounds.

Methods: Data will be collected through interviews and questionnaires and on a block sorting task, a communications game, Palmer's Concept Familiarity Index, Stanford-Binet Intelligence Scale, and standard school readiness measures collected at age 5-8. Cross-cultural and social class comparisons will be made. Teachers will be interviewed and videotaped while interacting with the children. The congruence between home and school environments will be studied.

Duration: November 1972-November 1975.

Cooperating group(s): Spencer Foundation.

Publications: Copies of the study will be available from the investigators.

32-NG-4 ECONOMIC COST AND VALUE OF CHILDREN IN FOUR AGRICULTURAL SOCIETIES

Investigator(s): Moni Nag, Professor and Associate Head, Demography Division, International Institute for the Study of Human Reproduction, Columbia University, New York, New York 10032.

Purpose: To determine the economic cost and value of rearing children in four different agricultural societies.

Subjects: Individuals living in peasant communities in Indonesia, Nepal, and Mexico, and a farming community in the United States.

Methods: Anthropological techniques of intensive observation together with extensive questionnaire surveys will be used. One year of field research will be carried out in each community. Intensive observation of domestic and productive activities will be used to assess the costs and benefits associated with different family sizes in each community. A census and fertility survey of the four populations will be carried out to determine actual fertility and attitudes regarding fertility. Comparable statements concerning the relationship between actual behavior and attitudes regarding fertility and the economic consequences of fertility will be made for each group.

Duration: July 1971-June 1974.

Cooperating group(s): National Institute of Child Health and Human Development, National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

32-NG-6 A CROSS-SECTIONAL STUDY OF CHILDREN IN A DEVELOPING COUNTRY

Investigator(s): Harben Boutourline-Young, M.D., Yale Tunis Project, 8-10 Rue Nigeria, Tunis, Tunisia, Africa; and Gino Tesi, Department of Statistics, University of Florence, Florence, Italy.

Purpose: To conduct a cross-sectional study of children in a developing country of Africa.

Subjects: 8,000 children, ages 0 to 16, equally divided by sex, who reside in Tunis, Tunisia. Equal numbers of children for five defined social classes were seen at each age with 2-month intervals from birth to 26 months, and at 6-month intervals from 2 1/2 to 16 years.

Methods: Data were collected through neurological examinations, physical examinations, anthropometric measures, and socioeconomic data. A modified form of the Bayley Scales of Infant Development was administered to children from 2 to 30 months of age. Preschool and school test data were collected on the children who were 2 1/2 to 16 years old. Medical and social histories were gathered on the children.

Findings: There are highly significant social class differences in mental development, physical development, and physical health between the impoverished and the middle class groups. These appear much greater than anything published in industrially advanced countries.

Cooperating goup(s): The Grant Foundation, New York; Agency for International Development; National Center for Health Statistics, U. S. Department of Health, Education, and Welfare; Yale University; Harvard University; Peace Corps.

Publications: Boutourline-Young, H. Socio-economic factors and child development. In O. L. Kline and P. Gyorgy (Eds.), *Malnutrition is a problem of ecology.* White Plains, New York: Phiebig, 1970; Boutourline-Young, H. Measurement of possible effects of improved nutrition on growth and performance in Tunisian children. In N. S. Scrimshaw and A. M. Altschul (Eds.), *Amino acid fortification of protein foods.* Cambridge: M.I.T. Press, 1971. Pp. 395-425; Boutourline-Young, H. Effect of nutrition on growth and performance. *Agricultural Science Review*, 1970, 8, 1-8.

EDUCATIONAL FACTORS AND SERVICES

General Education

32-OA-1 SCHOOLING IN SCHÖNHAUSEN, WEST GERMANY

Investigator(s): George D. Spindler, Ph.D., Professor, Department of Anthropology, Stanford University, Stanford, California 94305.

Purpose: To determine the influence of the primary school on instrumental perceptions and preferences under conditions of rapid urbanization.

Subjects: 282 children, ages 9 to 16, in primary schools in Schonhausen, West Germany. The children were in grades 3, 4, 6, 7, and 8; 54 percent were girls. Nine teachers and 30 parents were involved in the study.

Methods: Ethnographic observations were made of the classrooms to discover the processes of cultural transmission that take place. An instrumental activities inventory was administered to the children and adults. The inventory consisted of line drawings which depicted specific activities that were linked to certain goals relevant to an urban or folk orientation.

Findings: Significant variations were found in relationship to age and sex, and the school ideology was found to influence idealized instrumental choices. The children were found to be more urban-oriented than their teachers or parents.

Duration: Spring 1968-spring 1972.

Cooperating group(s): National Science Foundation; Procter and Gamble; Schonhausen Elementary School and Endersback Hauptschule, West Germany.

Publications: Spindler, G. (Ed.) *Education and cultural process: Toward an anthropology of education.* New York: Holt, Rinehart & Winston, Inc. (Scheduled for Fall, 1973).

32-OA-2 SYSTEMATIC MONITORING OF EDUCATIONAL PROGRAMS FOR PRESCHOOL CHILDREN

Investigator(s): Helene Borke, Ph.D., Assistant Professor, Department of Psychology; and Shirley S. Angrist, Ph.D., Associate Professor, Department of Sociology, School of Urban and Public Affairs, Carnegie-Mellon University, Schenley Park, Pittsburgh, Pennsylvania 15213.

Purpose: To develop a monitoring system that will provide ongoing evaluation of key aspects of the effectiveness of an early childhood center in meeting its educational and social objectives.

Subjects: 60 children, ages 3 to 5, who are enrolled in two child care centers. Half of the children attend a university child care center and are primarily from families of students, staff, and faculty. Half of the children attend a child care center connected with a public school system, which serves children drawn from the immediate neighborhood of the school and is funded by Title 4A.

Methods: Observable behaviors of children and teachers have been selected and organized into five categories: affective, cognitive, language, motor, and creativity. Time samples are taken by trained observers on individual children and teachers. Behaviors are sampled to include the range of activities during all wakeful times, and a method is being developed to monitor individual activity areas. Short time samples are used to determine the number

of children attracted to the area, the duration of their stay, the materials selected, and teacher participation. The data will be analyzed in several ways, including summaries of the behaviors exhibited by particular individuals, comparisons of observations for groups of children under varying conditions, and comparisions of observations on the same individuals over time. The feedback to the teacher provided by this information will form the basis for decisions about changes in the day care center environment. After the changes have been introduced, feedback will again be given to the teacher. Through this process of continuous feedback and evaluation, it will be possible to monitor the extent to which a school or center actually achieves its interpersonal and cognitive objectives.
Duration: September 1972-June 1973.
Cooperating group(s): Alcoa Foundation.

32-OA-3 AN INTERNATIONAL EXCHANGE PROGRAM FOR ELEMENTARY SCHOOL CHILDREN

Investigator(s): Alice Van Krevelen, Ph.D., Chairman, Department of Psychology, Berea College, Berea, Kentucky 40403.
Purpose: To evaluate the cultural, educational, and psychological values of an international exchange program for elementary school pupils.
Subjects: Four Iranian children: two girls and two boys, age 11; and four American children from Berea, Kentucky.
Methods: The Iranian children will spend one month as students in an American school, and the American children will spend one month as students in Tehran, Iran. This first group of exchange students will be studied descriptively and through case study methods. Naturalistic observations will be made and measuring instruments will be developed for the project.
Duration: November 1972-continuing.
Cooperating group(s): International School-to-School Experience.

32-OA-4 CHILDREN ON CAMPUS: A SURVEY OF PREKINDERGARTEN PROGRAMS AT INSTITUTIONS OF HIGHER EDUCATION IN THE UNITED STATES

Investigator(s): Bernard Greenblatt, M.A., Associate Professor; and Lois Eberhard, M.S.W., Research Associate, School of Social Policy and Community Services, State University of New York at Buffalo, Buffalo, New York 14214.
Purpose: To estimate the number of prekindergarten programs on college campuses in the United States, and to describe selected aspects of these programs.
Subjects: 310 randomly selected senior coeducational accredited colleges and universities in the United States.
Methods: A questionnaire was mailed to each college in the study.
Duration: October 1970-January 1973.
Cooperating group(s): Women's Bureau, U. S. Department of Labor; Office of Child Development, U. S. Department of Health, Education, and Welfare; Research Foundation, State University of New York.

32-OA-5 THE EFFECT OF BONUS AND BONUS DEDUCTION ON TEACHER PERFORMANCE

Investigator(s): Claudia A. Johnson, M.A., Director, Early Childhood Education Center, University of Utah, Salt Lake City, Utah 84108.

Purpose: To determine the effects of bonus and bonus deduction for teachers who are dependent upon increase in a specified activity of their students.
Subjects: Four female preschool teachers; and 40 boys and girls, ages 3 to 5, with normal intelligence, who attend a university preschool.
Methods: The design included a single subject for four teachers with alternating sequence of treatments. Data will be collected for each teacher on their positive, negative, and neutral interactions and the number of time-outs they use. Data will be collected on the students for their participation in specified classroom activities. They were tested for generalization to other times of day.
Findings: There was little generalization; both techniques were effective in dramatically increasing student participation. The variables responsible for the student change could not be isolated. Teacher response was favorable; no retention was evident in follow-up observation.
Duration: March 1972-June 1972.
Cooperating group(s): Psychology Department, University of Utah.

32-OA-6 CIRCUS: MEASUREMENT, RESEARCH, AND DEVELOPMENT

Investigator(s): Scarvia Anderson, Ph.D., Executive Director, Special Development, Educational Testing Service, Princeton, New Jersey 08540.
Purpose: To develop a comprehensive assessment program for use in nursery school and kindergarten to diagnose the educational needs of individual students, and to evaluate program effectiveness.
Subjects: Preschool children throughout the United States.
Methods: The development process will include a national survey of the characteristics of children and the programs they attend, with special attention to interrelationships among pupil and program variables. Based on experience in the Educational Testing Service-Office of the Child Development Longitudinal Study of Disadvantaged Children, the evaluation of *Sesame Street,* and other child development research; 16 measures of children's interests, cognitive and perceptual skills, information processing, and divergent production have been developed. Instruments to assess teacher and program characteristics have also been developed. All instruments are designed to be used by and to be meaningful to teachers and others who have no special training in psychology or research.
Duration: 1971-1974.

32-OE-1 EARLY IDENTIFICATION OF CHILDREN WITH POTENTIAL SCHOOL PROBLEMS

Investigator(s): Theodore G. Brough, M.A.T., Project Supervisor; Gary D. Dunford, Ed.D., Psychologist; and William P. Hammer, M.S., Director, Special Services, Pupil Personnel Center, Churchill County School District, Fallon, Nevada 89406.
Purpose: To develop a screening technique for the detection of potential reading problems and other school difficulties among rural children in Nevada.
Subjects: 350 boys and girls, ages 4-5 to 6-8, enrolled, or about to be enrolled, in kindergarten in five small towns in western Nevada.
Methods: The subjects were screened using the Early Detection Inventory (EDI), medical screening was performed, and parents were interviewed for family and medical history. Early in the school year, 125 children were rated on school tasks by teachers and were administered the Metropolitan Reading Readiness Test (MRRT) in the spring. Correlations were made between the measures and multiple linear regression equations were developed.

Findings: The weighted EDI scores are highly correlated to the MRRT scores 1 year later (r = .49). The EDI scores are significantly related to a simple count of suspected physical difficulties. Approximately 15 percent of the EDI score variance is accounted for by six defined physical difficulties, while another 15 percent is accounted for by social and family variables. Geographic factors (i.e., size of town and distance from metropolitan centers) account for about 8 percent of the variance.

Duration: Spring 1971-spring 1974.

Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.

32-OF-1 TYPES OF BILINGUALISM AND SCHOOL PERFORMANCE OF NAVAJO CHILDREN

Investigator(s): Kenneth Stafford, Ph.D., Professor, Department of Educational Psychology, Arizona State University, Tempe, Arizona 85281.

Purpose: To study the effects of lingual types on the school achievement of Navajo children. (Lingual types include compound bilinguals, English-speaking monolinguals, and Navajo-speaking monolinguals.)

Subjects: Navajo children, attending Window Rock-Ft. Defiance schools in northern Arizona, followed from kindergarten through second grade.

Methods: The same children were studied for a period of 3 years. The children were tested on the Metropolitan Readiness Test and the Metropolitan Achievement Test. Information was collected on (1) IQ score discrepancies which result from the use of different types of tests, (2) the best predictors of school success, and (3) the effects of early English instruction on later school performance. (See *Research Relating to Children, Bulletin 26*, 1970, 65.)

Findings: Achievement differences were found initially among the lingual types, favoring the ones most familiar with the English language. These differences, however, tended to diminish with time spent in school. The specific study of English during the kindergarten year had a positive effect on the achievement of Navajo-speaking and bilingual children. Vast differences in scores from these groups were found between culturally biased and less biased intelligence test results.

Duration: September 1970-August 1972.

Cooperating group(s): Window Rock-Ft. Defiance Schools; Office of Education, U. S. Department of Health, Education, and Welfare.

32-OF-2 FORMATION OF TEACHERS' EXPECTATIONS OF STUDENTS' ACADEMIC PERFORMANCE

Investigator(s): Sherry L. Willis, Ph.D., Assistant Professor, Pennsylvania State University, S-105 Human Development Building, University Park, Pennsylvania 16802.

Purpose: To explore the formation of teachers' expectations of students' academic performance, including (1) the stability over time of teachers' rankings of expected student achievement, (2) the ability of their initial rankings to predict students' scores on the Metropolitan Reading Test (MRT), (3) the possible influence of knowledge of test scores on their second rankings of expected achievement, and (4) the relation between student behaviors and characteristics as perceived by the teacher and the teacher's rankings.

Subjects: 74 female grade 1 teachers in the Memphis, Tennessee Public School System and the Shelby County School System, who taught all academic subjects in self-contained elementary classrooms in middle class communities.

Methods: Group I: Teachers were requested to respond to questionnaires and rate their pupils on specific physical, social, and academic characteristics. Group II: Teachers were asked to discuss their pupils in unstructured interviews which were tape recorded. Both groups of teachers were requested to rank order their pupils on expected academic performance. Data were collected three times: during the first 2 weeks of school, 1 to 2 weeks after the MRT had been scored by the teachers, and at the end of the first semester.
Findings: Teachers' rankings of expected student achievement were found to be highly stable over time. The correlation between teachers' initial rankings and students' scores on the MRT were significant (.01). Teachers' knowledge of test results may have influenced their second rankings of expected achievement, since there was a significant difference between teachers' first rankings correlated with MRT scores and teachers' second rankings correlated with MRT scores. Results from ratings on the questionnaires were compatible with results from interview data. Many additional student behaviors or characteristics derived from interview data were found to correlate significantly with teachers' rankings.
Duration: September 1971-August 1972.

32-OF-3 INTERNATIONAL ASSOCIATION FOR THE EVALUATION OF EDUCATIONAL ACHIEVEMENT

Investigator(s): Bruce Choppin, Ph.D., National Foundation for Educational Research in England and Wales, The Mere, Upton Park, Slough, Bucks, SLI, 2DQ, England.
Purpose: To study academic achievement in England and Wales in reading comprehension, literature, science, and French.
Subjects: Students, ages 10 and 14; preuniversity students; teachers; and school heads in England and Wales.
Methods: Research organizations in Australia, Belgium, Chile, England and Wales, Finland, France, West Germany, Hungary, India, Iran, Ireland, Israel, Italy, Japan, New Zealand, Netherlands, Poland, Rumania, Scotland, Sweden, Thailand, and the United States have formed a consortium, the International Association for the Evaluation of Educational Achievement (IEA), to compare educational attainment in relation to different forms of school organization, curricula, and teaching methods. Phase I of IEA's international survey of achievement in mathematics has been completed. Since Phase I findings were fundamental for school reform and policy making, Phase II was launched. Achievement in science, civic education, French and English as foreign languages, reading comprehension, and literature were studied. The National Foundation for Educational Research (NFER) divided work for Phase II into three stages: Stage 1 — Preparatory Pretesting Stage; Stage 2 — Testing in Reading Comprehension, Literature, and Science; and Stage 3 — Testing in French. Required information is collected from carefully drawn samples of schools and pupils by (1) tests given to the pupils, and (2) questionnaires given to the pupils, teachers, and school heads. (Data collected are analyzed by computer with data from other countries.) During Stage 1, sampling designs and proposals were formulated and analysis programs were developed. IEA organized international meetings and attempts were made to develop a conceptual framework for the cross-national evaluation of educational systems. Stage 2: In 1969 the content of instruments and analysis programs previously developed were modified. Final versions of the tests, questionnaires, and attitude scales were developed in 1970; and about 30 pupils from each of 149 secondary schools and 159 primary schools were tested. Completed test materials were coded and checked at NFER; data from all countries were processed at IEA centers in New York and Stockholm. Further analyses of data from England and Wales (i.e., use of Nuffield curricula, existence of selective and comprehensive school systems) are being carried out. (A report on these analyses will be published in 1973.) Stage 3: Final French tests

were compiled, covering four major language-skills areas: listening, speaking, reading, and writing. Approximately 5,000 pupils in 145 secondary schools were tested in 1971. Further international projects are proposed by IEA, such as comparative investigations of the context of teaching as represented by the classroom environment and teachers' behavior, but details have not been finalized.
Duration: 1967-continuing.
Cooperating group(s): Strictly international activity is financed by international funds. Cooperating groups in England include Schools Council; Department of Education and Science; National Foundation for Educational Research.
Publications: Foshay, A. W. (Ed.) *Educational achievement of thirteen-year-olds in twelve countries.* Hamburg: UNESCO Institute for Education, 1962; Husen, Torsten (Ed.) *International study of achievement in mathematics: A comparison of twelve countries.* 2 vols. Stockholm: Almqvist and Wiksell, 1967 and New York: Wiley, 1967; Pidgeon, Douglas A. (Ed.) *School organisation and achievement in mathematics: A national study in secondary schools.* Slough: National Foundation for Educational Research, 1967; Postlethwaite, T. N. *School organisation and student: A study based on achievement in mathematics in twelve countries.* Stockholm: Almqvist and Wicksell, 1967; Rosenshine, Barak. *Teaching behaviour and student achievement.* Slough: National Foundation for Educational Research, 1971.

32-OF-4 ACADEMIC PROGRESS IN OPEN AREA VERSUS CLOSED CLASSROOMS IN THE PRIMARY GRADES

Investigator(s): W. W. Grant, M.D., Director; Anne E. Bell, M.A., Psychologist; Fred Switzer, M.A., Psychologist, Child Development Clinic, Children's Hospital of Winnipeg, 685 Bannatyne Avenue, Winnipeg, Manitoba R3E OW1, Canada; and M. S. Aftanas, Ph.D. Associate Professor, Department of Psychology, University of Manitoba, Winnipeg, Manitoba, Canada.
Purpose: To investigate the relative merits of the nongraded (open area) school program and the graded (closed classroom) system, in terms of the academic achievement of the children during the first 3 years.
Subjects: 300 first graders, ages 5-8 to 6-7, equally divided by sex, who attend two schools in the same middle class socioeconomic area during 2 successive years.
Methods: A psychological test battery was administered to all children prior to school entry. The battery included measures of school readiness, intelligence, visual, auditory, and kinesthetic perceptual skills, vocabulary, and visual-motor coordination. Further diagnostic testing and individual and group achievement tests have provided measures of progress in the two schools. The groups of beginning children in the schools were closely matched on IQ and in the various areas of perception examined by the preschool battery.
Findings: At the end of the first 3 years, the children in the graded school were making significantly better academic progress.
Duration: 1969-continuing.
Cooperating group(s): Department of National Health, Canada; St. Boniface School Board.
Publications: Copies of the report are available from the investigators.

32-OF-5 NORTH CAROLINA STATE SUPPORTED EARLY CHILDHOOD DEMONSTRATION CENTERS

Investigator(s): Hugh I. Peck, Ed.D.; Betty Landsburger, Ph.D., Program Consultant; and Suzanne Triplett, Program Consultant, Research and Evaluation, Learning Institute of North Carolina, 1006 Lamond Avenue, Durham, North Carolina 27705.

Purpose: To measure the effects of 1 year of kindergarten experience on 5-year-old children.

Subjects: Pretest sample: 2,286 children, age 5, from various racial and socioeconomic backgrounds who are enrolled in 54 North Carolina state supported kindergarten centers. Posttest sample: 711 children from 16 centers, and 277 randomly selected 6-year-old children.

Methods: This study is a report of the third year (1971-72) of a 3-year evaluation of North Carolina state supported kindergartens which began in 1969. The assessment instruments administered to the children entering the program included the Home Information Scale (Short Form), to gather information on the child's background; and the Preschool Inventory, to gather data on personal-social responsiveness, associative vocabulary, and concept activation (numerical and sensory). Tests administered on a pre-post basis included the Draw-A-Man Test; the Test of Basic Experiences (language and mathematics); and the Classroom Behavior Inventory, to gather data on the child's introversion-extroversion, social behavior, and task-oriented behavior. The 6-year-old children were administered the Stanford Achievement Test and the Classroom Behavior Inventory.

Findings: One of the results of the LINC evaluation over 3 years demonstrates that kindergarten experiences do make positive and significant differences in the noncognitive behavior of 5-year-old children, and the children continue to make these changes after first grade.

Duration: December 1969-continuing.

Cooperating group(s): North Carolina State Department of Public Instruction.

32-OF-6 IMPROVEMENT OF ACADEMIC ACHIEVEMENT THROUGH RESIDENTIAL BEHAVIORAL MODIFICATION THERAPEUTIC CAMPING EXPERIENCE

Investigator(s): Harve E. Rawson, Ph.D., Director, Englishton Park Academic Remediation and Training Center; and Professor, Department of Psychology, Hanover College, Hanover, Indiana 47243.

Purpose: To improve children's academic skills, to change children's attitudes towards learning, to modify children's behavior which interferes with learning in the classroom, and to have the child experience success in school-type activities.

Subjects: 25 boys, ages 8 to 11; 25 boys, ages 11 to 14; 25 boys and girls, ages 6 to 8; and 25 boys and girls, ages 8 to 10. All children experience severe academic difficulties in normal classrooms, exhibit behavioral disorders, and are average or above in intelligence.

Methods: A control test design will be used with pre- and posttesting for all groups to measure (1) attention span, through a direct behavioral observation method; (2) attitudes towards teachers, peers, school subjects, and school settings, through the use of projective tests; and (3) changes in academic self-concept, peer relationships, social retaliation, and likeability, through specially designed behavioral tests. Data will be analyzed through analysis of variance.

Findings: There were significant improvements in academic self-concept, likeability, peer interaction, aggressiveness, and attention span among the children who participated in the program. There were also significant increases in school behavior and grades, once the child returned to the regular classroom.

Duration: 1970-continuing.

Cooperating group(s): Ohio Valley Presbytery; Lincoln Trails Synod of the United Presbyterian Church.

Publications: Rawson, H. E. Academic remediation and behavior modification: Marriage in a summer school camp. *Elementary School Journal* (in press); Rawson, H.E. Behavior modification in a summer camp setting: Englishton Park. *Journal of Health, Physical Education and Recreation* (in press); Rawson, H. E. Specialized camping programs and behavior change: Three years of research. *Camping Magazine* (in press).

32-OG-1 A STUDY OF ADJUSTMENT TO NURSERY SCHOOL THROUGH SHIFTS IN BEHAVIOR

Investigator(s): Pramila Phatak, Ph.D., Reader; and Parul Dave, M.Sc., Lecturer, Child Development Department, Faculty of Home Science, University of Baroda, Baroda, Gujarat, India.

Purpose: To study changes in children's behavior patterns as they proceed through school, to study how early behavior patterns relate to later ones, and to study the stability of these patterns over time in individual children.

Subjects: 16 boys and 8 girls who began school in 1968.

Methods: The children were observed when they began school, at the end of the first term (3 months), and at the end of the second term (6 months). Data were collected on independence, interaction with teachers, interaction with other children, and school acceptance. A Q-test was used to determine the significance of shifts towards more positive attitudes.

Findings: In their development of self-reliance, the children were found to go through a stage of not being spontaneous in their interaction with others, or being independent but isolated. Most of the children avoid teachers or are indifferent towards them before accepting them as friendly adults or as helpful authority. Children interact with teachers formally or as substitute parents. The children are indifferent to other children initially but gradually accept them as a part of the situation or their society. In terms of school adjustment, the children shift from accepting school as an extension of the home or social play situation to accepting it as an independent situation, however, they do not develop a relaxed attitude towards school.

Duration: June 1968-April 1972.

Publications: Results of the study are available from the investigators.

32-OG-2 SCHOOLS WITHOUT FAILURE: AN EVALUATION OF THE GLASSER APPROACH

Investigator(s): Bruce D. Keepes, Ed.D., Director, Department of Educational Technology, Palo Alto Unified School District, 25 Churchill Avenue, Palo Alto, California 94306; and Patricia Engle, Ph.D., School of Education, University of Illinois at Chicago Circle, Chicago, Illinois 60680.

Purpose: To evaluate the effectiveness of a systematic application of the idea of building success rather than failure identities in elementary school children.

Subjects: About 300 students in each of two schools, grades kindergarten through 12, who represent a cross-section of socioeconomic status and ethnic groups.

Methods: One school followed the traditional approach, while the second applied the methods advocated by William Glasser for building success identities. (Glasser, W. *Schools without failure*. New York: Harper and Row, 1969.) A time series design was used with some comparisons made between the traditional and the Glasser school. Measuring instruments included the Sears Self-Concept Scale, Crandall's Internal Attribution Responsibility Scale, classroom observations, attendance data, and achievement and ability test scores.

Findings: Tentative findings indicate generally positive results.

Duration: September 1969-November 1972.

Cooperating group(s): Educators Training Center, Los Angeles.
Publications: Copies of the report are available from the investigators.

32-OG-3 TEACHER STRATEGIES AND STUDENT ENGAGEMENT IN LOW INCOME AREA CLASSROOMS

Investigator(s): Robert D. Hess, Ph.D., Professor; and Ruby Takanishi Knowles, M.A., Research Assistant, School of Education, Stanford University, Stanford, California 94305.
Purpose: To study the methods teachers employ to interest and engage students in classroom learning, and to investigate teacher strategies and student engagement in self-contained and open plan classes.
Subjects: Teachers and students from low income area schools. During the first year of the study, third and fourth grade classes in nine schools were studied; during the second year, grades kindergarten through 6 in one school were studied.
Methods: Students and teachers were observed in natural classroom settings at selected times during the school year. Two observation instruments were developed for the study: the Student Engagement Observation Instrument, which records student interest and involvement in classroom learning; and the Teacher Strategies Observation Instrument, which records the use of teacher engagement strategies. Student and teacher behaviors are recorded simultaneously to permit linkages between both in data analysis.
Duration: October 1970-November 1974.
Cooperating group(s): Stanford Center for Research and Development in Teaching, Stanford University.
Publications: Technical Report Series of Stanford Center for Research and Development in Teaching, Stanford University, Stanford, California 94305.

32-OG-4 THE IDENTIFICATION OF PHYSICAL SETTINGS THAT FOSTER TOWN- AND FARM-REARED CHILDREN'S USE OF AND ADJUSTMENT TO DAY CARE AND PRESCHOOL PROGRAMS

Investigator(s): Lawrence V. Harper, Ph.D., Assistant Professor, Department of Applied Behavioral Sciences, University of California at Davis, Davis, California 95616.
Purpose: To determine the effects of different physical settings and types of materials on the play, general adjustment, and social behavior of preschool children.
Subjects: Approximately 28 children, ages 3 to 5, equally divided by sex.
Methods: Weekly 15-minute time samples of behavior were collected during free play for 40- to 60-minute periods. Child behaviors in *undisturbed* settings were examined to obtain baseline data during the first year of the study. During the next 3 years, settings were systematically manipulated to determine their effects on child behavior. Data were collected in a university nursery school throughout three 10-week quarters.
Duration: Fall 1971-summer 1975.
Publications: Preliminary results of the study are available from the investigator.

32-OG-5 WESTTOWN SCREENING PROJECT

Investigator(s): David J. Sands, Ph.D., Medical Research Scientist, Eastern Pennsylvania Psychiatric Institute, Henry Avenue and Abbottsford Road, Philadelphia, Pennsylvania 19129; and Margaret Morgan, M.A., Clinical Psychologist, Westtown School, Westtown, Pennsylvania 19395.

Purpose: To develop a screening technique to describe and identify the personality characteristics of entering residential students at the Westtown School, Westtown, Pennsylvania (a private Friends school with day and residential students).
Subjects: Approximately 200 boys and girls, ages 13 to 15, who are entering residential students and are above average in intelligence and academic achievement.
Methods: The Cattell High School Personality Questionnaire (HSPQ) and the Thematic Apperception Test (TAT) were administered to all students over a 2-year period. In the spring of each year, the children are divided into three groups: very well adjusted, adjusted, and poorly adjusted. Test scores are then compared among groups.
Findings: In the first year, the HSPQ and the TAT discriminated the poorly adjusted group from the combined adjusted and well adjusted groups.
Duration: September 1971-May 1974.

32-OI-1 THERAPEUTIC PRESCRIPTIONS IN AN ALTERNATIVE SCHOOL

Investigator(s): David F. Duncan, M.A., President, Alternatives for Troubled Youth, Inc., 2301 Lou Ellen Lane, Houston, Texas 77018.
Purpose: To demonstrate the effectiveness of using teachers as lay therapists in an *alternative school* after providing them with individualized *therapeutic prescriptions* for problem children based on psychological testing and interviews by a treatment specialist.
Subjects: All boys and girls, ages 12 to 18, in a private, nonprofit alternative school. The subjects are dropouts, potential dropouts, or have school behavior problems.
Methods: Teacher ratings, empirical behavior counts, and objective test results will be used to demonstrate any changes in the children's behavior. The Minnesota Multiphasic Personality Inventory and Leary's Interpersonal Checklist will be administered to all children.
Findings: Both personality tests have been found to be effective in developing a quick, accurate clinical picture which can be used by teachers.
Duration: November 1972-May 1973.
Cooperating group(s): The Humanite Educational Foundation.

32-OJ-1 HOME START I

Investigator(s): Ralph Scott, Ph.D., Director, Educational Clinic, University of Northern Iowa, Cedar Falls, Iowa 50613.
Purpose: To enable parents to become more effective teachers of their preschool children, and to facilitate children's preschool development to prepare them for classroom learning.
Subjects: Two groups of children, age 4, who reside in four socioeconomically deprived school attendance centers. The Horizontal Home Start (HHS) group consists of 20 Black females, 20 Black males, 20 white females, and 20 white males. The Vertical Home Start (VHS) group consists of 47 Black and 24 white children.
Methods: The HHS children were given 1 year of prekindergarten enrichment primarily in classroom activities; the VHS group was given 3 years of similar enrichment. The VHS program served the same group of students from the ages of 2 to 5, and the program focused on parental concerns and parental involvements. To control for home background factors, the Primary Mental Abilities (PMA) scores of children in both groups were compared with the scores of their older siblings who had not participated in the program. The PMA was administered in the early fall of grade 1 for the HHS group and all siblings, while the VHS group was given the test when they reached age 5.

Findings: There is evidence that less vulnerable children who have less need for early enrichment are more likely to be enrolled in a limited-enrollment enrichment program. Score gains of the VHS group were more extensive than gains of the HHS group when both groups were compared with their siblings. Greater gains were made by both groups in the Verbal Meaning and Perceptual Speed subtests, while neither program significantly influenced the Spatial Relations subtest scores. The VHS group scored significantly higher than their siblings on the Number Facility subtest, but the HHS group did not.
Duration: 1966-1974
Publications: Copies of the study are available from the investigator.

32-OJ-2 VALUE IMPOSITION IN EARLY EDUCATION: FACT OR FANCY

Investigator(s): Richard Elardo, Ph.D., Research Associate; and Bettye M. Caldwell, Ph.D., Director, Center for Early Development and Education, University of Arkansas, 814 Sherman Street, Little Rock, Arkansas 72202.
Purpose: To determine the extent to which parents, paraprofessionals, and teachers endorse the objectives that guide the introduction of learning activities in an early childhood intervention program.
Subjects: 44 mothers with preschool children enrolled in intervention programs in the Little Rock area; 27 teachers; and 37 paraprofessionals.
Methods: All subjects completed a 75-item questionnaire containing 54 objectives which were goals of the intervention programs and 21 items which were not. Subjects responded with "yes," "no," or "not sure" for each question (e.g., "While in school, I think children 3 to 6 years of age should learn to play safely ... tease classmates ... name the days of the week ... refuse to do what adults say").
Findings: The phenomenon of *middle class value imposition* does not seem to be present in the group studied. All subjects tended to share the same objectives and goals for children in the intervention programs. Parents placed more positive value on aggression than did teachers.
Duration: September 1971-February 1972.
Cooperating group(s): Office of Child Development, U. S. Department of Health, Education, and Welfare.
Publications: Copies of the study are available from the investigators.

32-OJ-3 PARENTS' USE OF A SELF-TUTORING PROGRAM: "PREPARING YOUR PRESCHOOL CHILD FOR SCHOOL"

Investigator(s): Alvin Price, Ph.D., Associate Professor; Owen Cahoon, Ed.D., Assistant Professor; and Lynn Scoresby, Ph.D., Associate Professor, Department of Child Development, Brigham Young University, Provo, Utah 84601.
Purpose: To determine which community agencies can most effectively dispense parent-oriented training materials to parents, and to determine which agencies can get parents to use the materials effectively.
Subjects: 12 families with kindergartners in each of nine schools, school personnel, PTA members, and community school liaisons. (The schools are divided equally among three socioeconomic areas: high, middle, and low.)
Methods: The three delivery systems (school personnel, PTA, community school organization) will each use a school from each socioeconomic level as a target. Parents' attitudes and attitude change will be measured by the Ideal Family Unit Inventory. The children's reading readiness will also be measured. Data will be analyzed through analysis of variance.

Duration: January 1972-June 1973.
Cooperating group(s): Provo, Utah School 1; Provo, Utah PTA.

32-OJ-4 EDUCATIONALLY HANDICAPPED: PARENT EFFECTIVENESS TRAINING

Investigator(s): Walter S. Lee, Ed.D., Coordinator of Special Education, Tamalpais Union High School District, P. O. Box 605, Larkspur, California 94903.
Purpose: To improve communication between parents and their educationally handicapped children; and to increase (1) the children's social and academic performance and self-esteem, (2) parental knowledge and understanding of their handicapped children, and (3) parental knowledge and understanding of their own behavior and relationship with their child.
Subjects: 42 parents of high school students who are currently enrolled in special education programs for learning disabilities.
Methods: The program involves two groups of 21 parents. Ten weekly sessions of 3 hours each are conducted for each group. In the first eight sessions, each parent receives a textbook, workbook, and other informational and practice materials. Both parents are taught how to talk and listen to their children. Demonstrations, role playing, classroom exercises, and tape recordings are used to show the parents how they block communication from their child. Training, coaching, and practice are provided each parent to develop particular skills such as *active listening*. The last two sessions consist of a group counseling experience for the parents which gives them an opportunity to explore and discuss some of their concerns about their relationship with their child and his school learning difficulty. A number of psychometric and behavioral rating instruments will be used. Data will be analyzed through nonparametric statistics.
Duration: October 1972-April 1973.

32-OJ-5 CENTER FOR THE STUDY OF STUDENT CITIZENSHIP, RIGHTS, AND RESPONSIBILITIES

Investigator(s): Arthur E. Thomas. Ed.D., Director, Center for the Study of Student Citizenship, Rights, and Responsibilities, 1145 Germantown Street, Dayton, Ohio 45408.
Purpose: To educate local parents in basic school procedures (e.g., testing, school discipline, choice of personnel, and the role of resident groups in interacting with the school system; to improve the treatment and assistance for juvenile offenders by suggesting improvements in the processing, treatment, and detention of juveniles, and in existing correction institutions; to promote new forums for democratic participation in the operation and improvement of schools; and to provide youths and their families an alternative by which to effect change within the existing governmental structure.
Subjects: Approximately 40,000 parents and students in Dayton, Ohio.
Methods: A program has been implemented to teach students and their parents the laws which are related to students' and juveniles' rights and how they can protect themselves through the use of those laws.
Findings: Both parents and students are more knowledgeable about school laws and procedures as a result of the program. The Dayton School System and other systems in the area are changing policies and procedures.
Duration: November 1970-continuing.
Cooperating group(s): Legal Service Program, Office of Economic Opportunity; Division of Education, National Urban League.
Publications: Community power and student rights: An interview with Dr. Arthur E. Thomas. *Harvard Education Review*, May 1972.

32-OJ-6 "MOTHER, MONTESSORI, AND ME": MOTHER-CHILD INTERACTION AND INTERVENTION PROJECT

Investigator(s): Christine Kallstrom, M.Ed., Director, Mid-Cities Learning Center, Box 1191, Arlington, Texas 79110; and Velma Schmidt, Ph.D., Professor, Department of Early Childhood, North Texas State University, Denton, Texas 76203.
Purpose: To assess the effects of a mother-child interaction and intervention project on young children.
Subjects: Three groups: (1) 6 high risk infants, ages 0 to 2, (2) 14 normal and handicapped children combined, ages 2 to 6, and (3) 48 normal, gifted, and handicapped children combined, ages 2 to 6.
Methods: Data were collected through observation scales, medical histories, neurological evaluations, Q-sorts, parent attitude scales, situation questionnaires, and mini-lectures. The standardized tests employed included the Bayley Scales of Infant Development, Vineland Social Maturity Scale, Peabody Picture Vocabulary Test, and a closure test.
Findings: Q-sorts revealed that the mothers of handicapped children ordered "what was most important" and "what they observed" in direct relation to their child's specific weakness. Mothers of the nonhandicapped children ordered developmental milestones more in terms of spontaneity and motor development (characteristics the handicapped had, but their mothers did not recognize as important).
Duration: September 1970-September 1975.

32-OK-1 EMERGENCY SCHOOL ASSISTANCE PROGRAM: COMMUNITY GROUPS

Investigator(s): Donald Baer, M.A., Research Director, Creative Learning Center, 1616 East Illinois, Dallas, Texas 75216.
Purpose: To evaluate the effects of a desegregated project on visitors to the school, on the school children, and on the staff and parents of the children.
Subjects: All visitors to the school during a 3-month period; and children attending the school.
Methods: Pre- and postvisit questionnaires were administered to the visitors, and statistical comparisons were made to evaluate their changes in opinion. Graduate students rated changes in the children's behavior through the use of pre- and postdesegregation videotapes of special classes.
Findings: Visitors' opinions changed towards favoring integration on all questions; three of the eleven changes were significant. Most of the visitors were highly in favor of integration initially.
Duration: November 1971-January 1973.
Cooperating group(s): Dallas Independent School District.

32-OK-2 THE SUPREME COURT DECISION AND ADMISSION POLICIES AT A FORMERLY ALL-WHITE SCHOOL FOR ORPHANS

Investigator(s): Arthur E. Fink, Ph.D., Professor, School of Social Work, University of North Carolina, Chapel Hill, North Carolina 27514.
Purpose: To examine the effects of the Supreme Court decision on the admission policy of a formerly all-white school for orphans in North Carolina.
Subjects: Orphans, ages 6 to 18, attending all-white boarding schools in North Carolina.
Methods: An examination will be made of the legal aspects and attitudes and practices

of administrators, teachers, alumni, general public, and professionals. Data were collected through court records, newspaper items, and interviews.

Duration: May 1970-June 1973.

Cooperating group(s): Institute for Research in Social Sciences, University of North Carolina.

Publications: Changing philosophies and practices in North Carolina orphanages. *North Carolina Historical Review*, 1971, 48(4), 333-355.

Specific Skills

32-PA-1 ALTERNATIVE RESPONSE MEASURES FOR MATHEMATICAL BEHAVIORS ON NUMERICAL TASKS IN PRESCHOOL SUBJECTS

Investigator(s): Thomas D. Yawkey, Ph.D., Assistant Professor, Department of Early Childhood Education, University of Maryland, College Park, Maryland 20742.

Purpose: To explore conservation responses to mathematical tasks of inequality using the verbal report (Piaget) and pointing responses (Skinner) in young children, to establish whether number conservation behaviors evidence a developmental or acquisitional re-actional sequence in young children, to identify the effects of verbal pretraining for number and words "greater than" and "same as," and to determine differences between sexes in ability to conserve number.

Subjects: 120 children: 12 boys and 12 girls in each of five age groups (3, 4, 5, 6, 7) from a middle socioeconomic population as represented by the white collar occupations of the heads of households.

Methods: A 2 X 5 X 2 X 2 X 3 factorial analysis of variance with repeated measures design was used. One group was trained in specific vocabulary, and the other group was not trained. All children were given mathematical transformations dealing with conservation. All responses gathered were analyzed using Piagetian (verbal report) and Skinnerian (pointing response) techniques, and all responses elicited under the Piagetian query were classified by judges to determine whether the content evidenced or did not evidence conservation. Newman-Keuls tests were employed as postmortem tests for mean differences.

Findings: Using the Skinnerian response measure, a developmental sequence in the acquisition of math behaviors in conservation were indicated by (1) consecutively increasing mean responses and age levels 3 to 4 significantly differing from ages 5 to 7, and (2) a significant interaction effect of age X task illustrated that two numerically unequal rows of stimuli immediately opposite, parallel, and in a 1:1 correspondence were perceived differently than two numerically unequal rows of stimuli parallel and opposite but lacking 1:1 correspondence between rows. With the Piagetian response, the notion of the developmental acquisition of mathematical behaviors was supported by (1) consecutively increasing mean responses of young children and age levels 3 to 5 significantly differing from ages 6 to 7, and (2) no other main or interaction effects were significant. No significant differences were found between trained and untrained conditions. No significant mean performance differences between sexes were noted with the verbal report. With the symptom response a significant sex X trial interaction resulted: females outperformed males on certain tasks, while the males outperformed females on one task.

Duration: May 1971-completed.

Cooperating group(s): Graduate Education Studies Council, University of Illinois; Computer Science Center, University of Maryland.
Publications: *Journal of Experimental Education*, 1971, 40, 88-96.

32-PB-1 SEMANTIC PREFAMILIARIZATION AND READING COMPREHENSION

Investigator(s): Alan M. Lesgold, Ph.D., Research Associate and Assistant Professor, Department of Psychology; Learning Research and Development Center, University of Pittsburgh, 107 M.I.B., Pittsburgh, Pennsylvania 15213.
Purpose: To determine whether semantic set is important in reading comprehension; whether poor comprehenders, who are good decoders, suffer production and/or mediation deficiencies in achieving and using appropriate semantic sets; and whether any skill deficits can be overcome through instruction.
Subjects: Approximately 200 boys and girls, ages 8 to 10, attending urban public schools.
Methods: A prefamiliarization treatment was given prior to an extemporaneous reading of text. A test of comprehension was then administered. Data were collected on the number of correct answers to questions and the number of facts correctly recalled from text in the free recall procedure. Data were also collected on vocabulary reading scores and reading comprehension scores.
Findings: Semantic prefamiliarization was found to improve free recall performance without improving question-answering performance.
Duration: June 1972-November 1973.
Cooperating group(s): National Institute of Education.
Publications: Copies of the report are available from the investigator.

32-PB-2 READING DISABILITY AND ASYMMETRY OF PERCEPTION IN THE VISUAL HEMIFIELDS

Investigator(s): Leonard Katz, Ph.D., Associate Professor, Department of Psychology, University of Connecticut, Storrs, Connecticut 06268.
Purpose: To study the acquisition and memory storage of spelling pattern information among young children.
Subjects: Several groups of 15 to 30 boys and girls, ages 6 to 9.
Methods: Words or bigrams are tachistoscopically presented to the left or right visual field while the subjects fixate centrally. The primary dependent variable is the number of letters correctly reported. The children are either divided into groups of good and poor readers or the entire range of reading ability is used.
Findings: All right handed children were found to see more letters correctly in the right visual field (presumably, in the left cortex). Poor readers show greater equality between visual fields (cortical hemisphere) than good readers.
Duration: March 1972-February 1973.

32-PB-3 CONSERVATION AND READING READINESS

Investigator(s): Beverly Brekke, Ed.D., Assistant Professor; John Williams, Ph.D., Professor, Department of Education, University of North Dakota, Grand Forks, North Dakota 58201; and Steve Herlow, Ph.D., Associate Professor, Department of Education, Kansas State University, Manhattan, Kansas 66502.
Purpose: To determine what relationships exist between selected tasks of conservation and selected factors of reading readiness.

Subjects: 46 boys and 35 girls in first grade, ages 70 to 91 months, with mental ages from 58 to 102 months.
Methods: Piagetian procedures were employed.
Findings: Conservation was found to be positively and moderately correlated with reading readiness. It should be taken into account as an additional measure of readiness for beginning reading instruction.
Duration: May 1970-completed.
Publications: To be published in *Journal of Genetic Psychology*, December 1973.

32-PC-1 CHILDREN'S ARTISTIC ABILITIES

Investigator(s): David Perkins, Ph.D., Director; and Howard Gardner, Ph.D., Codirector, Harvard Project Zero, Graduate School of Education, Harvard University, Longfellow 315, Cambridge, Massachusetts 02138.
Purpose: To determine the ways in which artistic skills develop naturally during childhood and to investigate methods for training aesthetic skills.
Subjects: Matched groups of children, ages 7, 9, 11, and 14, primarily from middle class communities.
Methods: The present study focuses on sensitivity to artistic style and on metaphoric thinking.
Duration: 1969-continuing.
Cooperating group(s): National Science Foundation; Spencer Foundation; Livingston Fund; Milton Fund, Harvard University.
Publications: Style sensitivity in children. *Human Development*, 1972, 15, 335-338.

Special Education

32-QE-1 FIFTH YEAR RESULTS IN EXPERIMENTS IN EARLY ELEMENTARY EDUCATION

Investigator(s): Robert Horton, Ph.D., Professor, Department of Sociology, Iowa State University, Ames, Iowa 50010; Edsel L. Erickson, Ph.D., Professor; and Martha Bullock Lamberts, M.A., Research Fellow, Department of Sociology, Western Michigan University, Kalamazoo, Michigan 49001; and Jane Bonnell, Ph.D., Liaison, Office of Testing and Evaluation, Grand Rapids Public Schools, Grand Rapids, Michigan 49502.
Purpose: To evaluate the first group of children to experience 5 years of Head Start education in the Grand Rapids Public School System, and to prepare a longitudinal data bank on all children in the school system at this grade level to permit a follow-up comparison study.
Subjects: 124 boys and girls in grade 3 of the compensatory Follow-Through Program, and control groups of children composed of inner city, fringe area, and outer city children in noncompensatory programs.
Methods: The groups of children were compared on the basis of the Stanford-Binet Intelligence Scale and the Metropolitan Achievement Test. All children in the school system were compared on achievement. Random samples of children were selected from each group of children for IQ testing. Through a computer analysis system, demographic variables were selected which had the greatest interaction effects in combination with the program.

Findings: The children in the program were found to be above national norms for comparable inner city children, almost 1 year ahead of their inner city cohorts in the same city. Measures of central tendency favored the outer city children on achievement and IQ, but these may be biased by a few extremely high scores by outer city pupils.
Duration: February 1972-August 1972.
Publications: Two reports on the study, (1) *Fifth year results in experiments in early elementary education*, and (2) *Vital statistics on the third year pupils of Grand Rapids Public Schools. Data Bank I*, are available from: Grand Rapids Public Schools, Office of Testing and Evaluation, Grand Rapids, Michigan 49502.

32-QE-2 PRE-POST ITEM ANALYSIS OF A THERAPEUTIC PROGRAM FOR CHILDREN WITH LEARNING DISABILITIES

Investigator(s): Edward Wasserman, M.D., Professor and Chairman; Elkan E. Snyder, Ed.D., Associate Professor; and Harvey Asch, Ph.D., Assistant Professor, Department of Pediatrics, New York Medical College, Flower and Fifth Avenue Hospitals, 1249 Fifth Avenue, New York, New York 10029.
Purpose: To correct learning disabilities in a disadvantaged population of children with normal intelligence.
Subjects: 25 boys and 5 girls, ages 7 to 11. The children are primarily from disadvantaged Puerto Rican backgrounds.
Methods: Medical, psychological, educational, social, and speech and hearing diagnostic evaluations were conducted. Special education processes and reading techniques will be employed, and the children will be grouped in high and low energy levels.
Findings: Increases were found in proficiency scores on psychological and education parameters.
Duration: September 1970-December 1973.
Publications: A neglected aspect of learning disabilities—Energy output level. *Journal of Learning Disabilities*, 1972, 5(3).

32-QE-3 THE LONGITUDINAL OBSERVATION AND INTERVENTION STUDY: A PRELIMINARY REPORT

Investigator(s): Bettye M. Caldwell, Ph.D.; Phyllis T. Elardo, Ph.D.; Richard Elardo, Ph.D.; and Ann Campbell, B.A., Center for Early Development and Education, University of Arkansas, 814 Sherman, Little Rock, Arkansas 72202.
Purpose: To determine precisely when the decline in development of disadvantaged children begins, to identify those functions in which it first appears, and to assess the effectiveness of different types of intervention to prevent the decline.
Subjects: 120 infants and their mothers.
Methods: The infants were recruited at approximately 6 months of age and will be studied until 3 years old. Each infant was assigned to one of four treatment groups on the basis of his score on a home observation measure (the Home Observation for Measurement of the Environment). Group 1 was tested using one of the Bayley Scales of Infant Development at differing intervals (approximately every 6 months); Group 2 was tested using the Bayley test at frequent intervals; Group 3 was tested, and infant teaching materials were used; and Group 4 was tested and home visits were made twice a month. The home visits included demonstrations on how to help babies learn.
Findings: Tentative results indicate that the developmental decline occurs by age 18 months, and that the children in Group 4 have not shown any superior performance.

Duration: November 1970-November 1973.
Cooperating group(s): Office of Child Development, U. S. Department of Health, Education, and Welfare; Little Rock Public Schools, Little Rock, Arkansas.
Publications: Paper presented at the Southeastern Conference on Research in Child Development, Williamsburg, Virginia, April 1972. Copies of the paper are available from the investigators.

32-QE-4 SUMMER DROP-IN EVALUATION

Investigator(s): Andrew F. Randazzo, Ph.D., Clinical Psychologist, Convalescent Hospital for Children, 2075 Scottsville Road, Rochester, New York 14623.
Purpose: To compare trained sociotherapists' and high school counselors' ratings of behavioral changes in children who participated in an inner city summer drop-in program.
Subjects: 20 inner city children, predominantly Black, ages 6 to 13.
Methods: The Devereux Child Behavior Rating Scale was completed for each child by a trained sociotherapist and high school counselor, both of whom worked directly with the child at the beginning, during, and at the end of the 8-week program. Each Devereux factor was analyzed by means of an analysis of variance. The factors were rates of status and test.
Findings: There were no significant differences between measures taken before and after the program. The counselors and therapists differed significantly on some factors in their ratings of deviance.
Duration: June 1972-September 1972.
Publications: Copies of the study are available from the investigator.

32-QE-5 HOME EDUCATION PROJECT FOR INNER CITY PRESCHOOLERS

Investigator(s): Sister Margaret I. Healy, B.V.M., Ph.D., Director, Teacher Education, Department of Education, Mundelein College, 6363 Sheridan Road, Chicago, Illinois 60660.
Purpose: To conduct an experimental home education program for disadvantaged children unable to attend a neighborhood child development center.
Subjects: Approximately 15 families with children, ages 2 and 3, who reside in a disadvantaged, predominantly Black neighborhood in Chicago.
Methods: A team of three community women will be employed and trained to work in the program. They will make weekly visits to the selected homes, bringing learning materials, and will demonstrate their uses. Each week new learning materials will be supplied and left in the home for use by the parent and child. A psychologist will give inservice training to the project team and will offer therapy to the participating families. The Stanford-Binet Intelligence Scale will be administered to the children, and a follow-up program will be conducted to determine whether gains made at ages 2 to 3 hold through later schooling and adulthood.
Duration: 1971-1973.
Cooperating group(s): National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

32-QE-6 PRESCHOOL SPECIAL EDUCATION AND HABILITATIVE PROGRAM FOR INNER CITY YOUTHS AND THEIR FAMILIES

Investigator(s): Ann Moxley, Ph.D., Psychologist, Community Diagnostic Clinic, 1000 Elmwood Avenue, Rochester, New York 14620; and Gretchen D. Tucker, M.A., Research Evaluator, Preschool Special Education Program, City School District, 50 Plymouth Avenue North, Rochester, New York 14614.

Purpose: To provide in the inner city and Model Cities area a center-based model preschool special education and habilitative program for children with developmental disorders.

Subjects: Approximately 30 inner city and Model Cities children, ages 0 to 6, who have developmental disorders (e.g., mentally retarded, emotionally disturbed, physically handicapped, hearing disabled, and multihandicapped).

Methods: All children are evaluated at 6-month intervals. Both standardized tests and developmental scale norms are used to assess the children's skills. Instruments used include the Bayley Scales of Infant Development; Stanford-Binet Intelligence Scale; Wechsler Preschool and Primary Scale of Intelligence; Sequenced Inventory of Language Development; developmental scale norms for fine motor, gross motor, and self-help skills; Wilcoxon Matched-Pairs; and Signed-Ranks Test.

Findings: Significant increases were found in intellectual and language functioning and among children in the second year of the program. No significant changes were found in self-help skills or among children in community programs after a 1-year follow-up.

Cooperating group(s): Bureau of Education for Handicapped, Office of Education, U. S. Department of Health, Education, and Welfare; City School District, Rochester, New York; Monroe Developmental Services.

Publications: Copies of the report are available from the investigators.

SOCIAL SERVICES

32-RB-1 EVALUATION OF PARENT-CHILD CENTERS AND THE ADVOCACY COMPONENT

Investigator(s): Douglas Holmes, Ph.D., Director; and Monica Holmes, Ph.D., Associate, Center for Community Research, 33 West 60th Street, Ninth Floor, New York, New York 10023.

Purpose: To evaluate the impact of the Parent-Child Centers (PCC) on parents and children, and to document progress of the Advocacy Component (AC) program in its first year.

Subjects: 440 parents of children, ages 3 to 4, who are participants in the PCC program; and 175 families and 35 public agencies involved in the AC program.

Methods: The PCC offers education, social services, health, and nutrition services to low income children, ages 0 to 3, and their families. After participating in the program for periods of 2 and 8 months, families in the PCC will be compared to those just entering the program. The children will be compared to national norms on the basis of the Denver Development Screening Test and a preschool inventory. Parent comparisons will be made on the basis of a specially designed interview schedule. The AC extends the PCC to additional families to effect agency coordination and stimulate new services. AC data were collected on the families through mailed questionnaires and phone calls, and on the agencies and AC staff through site visits at 4-month intervals.

Duration: September 1971-May 1973.

Cooperating group(s): Office of Child Development, U. S. Department of Health, Education, and Welfare.

32-RB-2 TEACHER SELECTION IN EARLY EDUCATION PROGRAMS OF THE COMMUNITY COLLEGE

Investigator(s): Doreen J. Croft, M.A., Associate Professor, School of Education, DeAnza College, 21250 Stevens Creek Boulevard, Cupertino, California 95014.

Purpose: To develop selection devices, to collect data and assess research data, and to determine the educability and success in the training of nursery school teachers.

Subjects: 50 to 100 college age subjects, ages 18 to 50, enrolled in a nursery school instruction course; most are women working toward a degree in nursery school assisting.

Methods: Each student will take a test based on a series of audio synchronized slides showing critical incidents in the nursery school or child care center. Results are tabulated and will be compared later with profiles of students who are finally selected for continuation in the program on the basis of personal interviews and evaluation of their performance in a laboratory school. Videotapes are also made of each student and rated for later profiles.

Duration: Fall 1971-continuing.

Cooperating group(s): Greenmeadow Nursery School, Palo Alto, California; Ravenswood Child Care Center, East Palo Alto, California; Lakewood Child Care Center, Sunnyvale, California; Vocational Education Act Grant, Research and Innovations Committee, DeAnza College.

32-RB-3 ASSESSING PSYCHOTHERAPEUTIC AND COMMUNITY ENVIRONMENTS

Investigator(s): Rudolf H. Moos, Ph.D., Director; and Paul M. Insel, Ph.D., Social Ecology Laboratory, Department of Psychiatry, Stanford University, Stanford, California 94305.

Purpose: To develop methods for characterizing and assessing psychotherapeutic treatment environments and community environments relevant to psychotherapeutic patients, including work environments, work- and task-oriented groups, and family or living setting environments.

Subjects: 137 adults and adolescents (over age 11) in 51 families, equally divided by sex, primarily from Caucasian middle and upper-middle class families in Palo Alto, California.

Methods: Data are being collected on a preliminary Family Environment Inventory to evaluate items for content, item-to-item correlations, item-to-subscale correlations, and other psychometric criteria. Data are being collected from families affiliated with various community organizations (e.g., churches, schools) on a voluntary participation basis. Efforts are being made to enlist the participation of underprivileged and minority families in the project.

Duration: July 1972-June 1975.

Cooperating group(s): Covenant Presbyterian Church, Palo Alto, California; The Newman Center for the Stanford Catholic Comunity, Palo Alto, California.

Publications: Results of the study will be available from the Social Ecology Laboratory, Department of Psychiatry, Stanford University, Stanford, California 94305.

32-RD-1 PREDICTABILITY IN ADOPTION: DELAWARE FAMILY STUDY

Investigator(s): Byron W. Lindholm, Ph.D., Director; Edmund V. Mech, Ph.D., Former Director; and David Fanshel, D.S.W., Consultant, Delaware Family Study, Children's Bureau of Delaware, 2005 Baynard Boulevard, Wilmington, Delaware 19802.

Purpose: To determine some factors that predict successful adoptions, and to identify some of the similarities and differences that exist between adoptive and natural families.

Subjects: The sample is composed of five groups of families: Group 1: 260 white adoptive families with white children who were placed for adoption begore age 2. Group 2: 12 adoptive families with white children who were placed for adoption when they were over age 2. Group 3: Nine Black adoptive families with Black children who were placed for adoption before age 2. Group 4: Four Black adoptive families with Black children who were placed for adoption when they were over age 2. Group 5: 68 families of children and their biological parents, all white.

Methods: Data are collected on adoptive children and their adoptive families before placement. Similar data are collected on these children and their families 6 months after placement, and when the children are 2, 5, 8, 11, and 14. Analysis of data to date (through age 5) consists of frequency and percent distributions; means, standard deviations, and measures of skewness and kurtosis; chi-square and t-tests; bivariate and univariate correlations; and factor analyses.

Duration: 1961-1982.

Cooperating group(s): Graduate Department of Social Work and Social Reseach, Bryn Mawr, Pennsylvania; Christiana Foundation, Wilmington, Delaware; Community Services Administration, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare; Office of Child Development, U. S. Department of Health, Education, and Welfare.

Publications: Reports on the findings, from placement of the children until they are age 5, are available from the investigators.

32-RD-2 UTILIZATION OF SUBSIDIES TO INCREASE BLACK ADOPTIONS

Investigator(s): M. Vivian Hargrave, M.S.W., Project Director; and Joan F. Shireman, Ph.D., Research Consultant, Subsidies for Black Adoptions, Illinois Department of Children and Family Services, 1439 South Michigan Avenue, Chicago, Illinois 60605.
Purpose: To demonstrate the use of subsidies as a means of securing adoption for Black children who would, without subsidy, have no legal nor adequate permanent home of their own.
Subjects: All Black children living in foster homes in the Chicago Region and East St. Louis District on November 4, 1971, and new children who come under care while the project is in operation.
Methods: (1) Casefinding, in terms of locating within the current foster care caseload Black children who are or should be made available for adoption. (2) Assisting foster families, who have good adoptive potential, through a subsidy to meet legal, medical, and/or maintenance costs, lack of which would be barriers to consummating an adoption. (3) Recruiting new Black adoptive applicants who, without subsidy, could not consider adoption. (4) Fact-finding related to the experiences of a public family and children's agency (in collaboration with two voluntary children's agencies) to fill the information gap in this new approach to expanding the adoption potential for Black homeless children.
Duration: 1971-1974.

32-RF-1 ECONOMIC, SOCIAL, AND POLICY ASPECTS OF CHILD CARE: A QUANTITATIVE ANALYSIS OF CHILD CARE ARRANGEMENTS OF WORKING MOTHERS

Investigator(s): Judith R. Lave, Ph.D., Assistant Professor, Department of Economics, Graduate School of Industrial Administration; and Shirley S. Angrist, Ph.D., Associate Professor, Department of Sociology, School of Urban and Public Affairs, Carnegie-Mellon University, Pittsburgh, Pennsylvania 15213.
Purpose: To determine working mothers' current expenditures for child care, to ascertain socioeconomic and familial characteristics of women with different expenditure levels and of users of various child care modes, and to analyze the effects of the 1971 Revenue Act concerning deductions for household and child care services on working mothers.
Subjects: All women employees in three settings: a university, a hospital, and a food processing company; and mothers who use any of three day care centers in the Pittsburgh area.
Methods: The subjects were asked to complete a mailed questionnaire concerning their job classification, hours worked, family characteristics, sources of child care, and expenditures for child care. The responses will be used in regression analyses to explain variations in child care modes and expenditures, actual and potential users of day care centers, and the likely effect of the new tax law on child care expenditures and deductions.
Duration: July 1972-August 1973.

32-RF-2 DAY CARE CHILD ASSESSMENT

Investigator(s): Elizabeth P. Kirchner, Ph.D., Deputy Project Head for Research; and Sarah I. Vondracek, Ph.D., Research Associate, Pennsylvania Day Care Study, Pennsylvania State University, Amy Gardner House, University Park, Pennsylvania 16802.
Purpose: To develop and evaluate an inventory which assesses aspects of cognitive,

emotional, and social development of day care children.

Subjects: 282 Negro and Caucasian boys and girls, ages 3 to 6, from urban and nonurban neighborhoods. The children are enrolled in day care centers in Pennsylvania.

Methods: Experienced psychometrists administered the inventory to children individually and teachers completed the rating scales. The inventory components were evaluated by item analysis, content analysis, and/or age, sex, race, and neighborhood comparisons.

Duration: October 1971-June 1973.

Cooperating group(s): Pennsylvania Department of Public Welfare.

Publications: Kirchner, E. P. and Vondracek, S. I. An assessment inventory for the day care child. Vol. I: Background, development, and sample. Report No. 14. University Park, Pennsylvania: Center for Human Services Development, Institute for the Study of Human Development.

32-RF-3 AN ASSESSMENT STUDY OF THE EFFECTS OF INTERVENTION IN EARLY CHILDHOOD

Investigator(s): Roy Lilleskov, M.D., Clinical Project Director, Child Development Center, Jewish Board of Guardians, 120 West 57th Street, New York, New York 10019.

Purpose: To determine if a program which offers several forms of intervention in early infancy, including compensatory child care in groups, can favorably influence the development of children from high risk families.

Subjects: 25 children, age 3, who have spent 1 or more years in an early intervention program including group day care; and a comparison group of 25 children from matched families who enter day care at age 3 without previous group care experience.

Methods: The children will be assessed developmentally when they transfer to a new day care or nursery school facility. Both groups will receive a complete diagnostic developmental assessment, including psychosocial history, clinical evaluation, direct observation of the child, and psychological tests (Stanford-Binet Intelligence Scale).

Duration: November 1971-November 1974.

Cooperating group(s): VanAmeringen Foundation, Inc.

32-RH-1 EVALUATION OF A COMPREHENSIVE SYSTEM FOR NEGLECTED AND DEPENDENT CHILDREN

Investigator(s): Marvin R. Burt, D.P.A., President; and Ralph Balyeat, Ph.D., Director, The Urban Observatory, Burt Associates, Inc., 4720 Montgomery Lane, Suite 811, Bethesda, Maryland 20014.

Purpose: To evaluate a system which provides revised procedures and programs for neglected, abandoned, and abused children.

Subjects: Approximately 4,000 children, ages 1 to 18, classified from 1969 to 1974 as neglected, abandoned, or abused.

Methods: A quasi-experimental design is employed which compares extrapolated trends from the period prior to the introduction of the new program (1969-1971) to a period after the initiation of the program (1971-1974). Each child is followed through the system during this period. Data are analyzed through a computerized data system using specific quantitative evaluation criteria.

Findings: There has been significant reduction in the institutionalization of children.

Duration: July 1971-July 1974.

Cooperating group(s): Tennessee Department of Public Welfare, Metropolitan Government of Nashville and Davidson County; Children's Bureau, U. S. Department of Health, Education, and Welfare.

Publications: Burt, M. R. and Blair, L. *Options for improving the care of neglected and dependent children.* Washington, D.C.: The Urban Institute, 1971.

32-RH-2 COMMUNITY-ORIENTED CARE IN CHILDREN'S INSTITUTIONS

Investigator(s): George Thomas, Ph.D., Research Associate, Regional Institute of Social Welfare Research, School of Social Work, University of Georgia, Athens, Georgia 30601.

Purpose: To implement three different methods of inducing institutional change towards community-oriented care, and to evaluate the comparative effectiveness of each.

Subjects: 32 children's institutions in Georgia which serve 1,600 neglected, dependent, or disturbed children, ages 6 to 18.

Methods: Baseline data were collected on institutional structures, programs, staff orientations, and children's attitudes and performance levels. Each institution was profiled and assigned to either experimental or matched control conditions. Inservice training, community leader-executive group sessions, and social sponsorship (fact finding and report dissemination) were the three approaches used. Comparisons will be made within the groups, between groups, and between the experimental and control institutions.

Duration: July 1971-June 1974.

Cooperating group(s): Office of Child Development, U. S. Department of Health, Education, and Welfare; Division of Family and Children Services, Georgia Department of Human Resources.

Publications: Copies of the study are available from the investigator.

32-RH-3 A PROSPECTIVE STUDY IN CHILD ABUSE

Investigator(s): Roger V. Cadol, M.D., Director; and Michael J. Fitch, Ed.D., Associate Director, Developmental Evaluation Center, Denver Department of Health and Hospitals, 646 Delaware, Denver, Colorado 80204.

Purpose: To conduct a longitudinal prospective study of the physical and emotional development of children with nonaccidental trauma, failure to thrive, and/or gross neglect.

Subjects: Approximately 100 children, ages 4 and under, when they entered the program. The children were enrolled each year for 3 years.

Methods: Data were collected on the actual incidence of child abuse through hospital and health clinics. A longitudinal follow-up study was conducted and comparisons were made with a control group over a 3-year period. The treatment group will receive intensive, coordinated care.

Duration: August 1972-August 1976.

Cooperating group(s): Denver Department of Social Services; Denver General Hospital; Denver Neighborhood Health Program; Office of Education, U. S. Department of Health, Education, and Welfare.

32-RJ-1 CONTINUANCE INTO POSTDIAGNOSTIC TREATMENT

Investigator(s): Patricia L. Ewalt, M.S., Assistant Chief Social Worker; Margrit Cohen, M.S., Chief Social Worker, Youth Guidance Center, Greater Framingham Mental Health Association, Inc., 88 Lincoln Street, Framingham, Massachusetts 01701; and Jerold S. Harmatz, B.A., Research Psychologist, Massachusetts Mental Health Center, 74 Fenwood Road, Boston, Massachusetts 02115.

Purpose: To identify the family characteristics related to continuance; and to compare two groups of families on continuance into postdiagnostic treatment, one of which contracts for traditional diagnostic evaluation and the other contracts additionally for brief intervention.
Subjects: Part I: 253 families (with a child up to age 18) who applied to a child guidance clinic. Part II: 97 families (with a child up to age 18) who applied to a child guidance clinic.
Methods: In Part I of the study, relationships were sought among 58 socioeconomic, health care, and attitudinal characteristics of the families at the time of application and outcome, in terms of continuance into postdiagnostic treatment. In Part II of the study, relationships were sought between the type of case management during initial contract and outcome, in terms of continuance in postdiagnostic treatment.
Findings: Five initial characteristics of the families were found to be significantly related to continuance into postdiagnostic treatment, some of which are consistent with, and some contrary to, those previously reported in the literature.
Duration: February 1969-continuing.
Cooperating group(s): Massachusetts Department of Mental Health; School of Social Work, Simmons College.
Publications: Ewalt, P. L., Cohen, M., and Harmatz, J. S. Prediction of treatment acceptance by child guidance clinic applicants: An easily applied instrument. *American Journal of Orthopsychiatry*, 1972, 42(5). A report, entitled *Characteristics related and unrelated to postdiagnostic treatment acceptance in a child guidance clinic*, is available from the investigators.

32-RL-1 A STUDY OF CHILDREN IN CRISIS

Investigator(s): Luitgard N. Wundheiler, Ph.D., Professor, Department of Education, Long Island University, Brooklyn, New York 11201.
Purpose: To explore the internal reactions of children to relocation crises caused by fire or eviction, and to evaluate crisis intervention effects of a drop-in day care service.
Subjects: 50 boys and girls, ages 3 to 6, who temporarily reside (between 2 weeks and 6 months) at a mid-Manhattan relocation hotel, and are enrolled in an on-site drop-in day care center.
Methods: The children will be divided into two groups: Group I is composed of 25 children who stay at the facility less than 5 weeks. Group II consists of 25 children who stay at the facility for 2 months or longer. Teachers, psychologists, and social workers will observe and assess the children during free play periods in a day care group and by means of individual interviews. Studies will be made of the influence of educational and therapeutic measures on the children's capacities to form groups, cope with past trauma, and adjust to the new enrironment.
Duration: September 1972-August 1974.
Cooperating group(s): Child Development Center, Jewish Board of Guardians.

32-SA-1 INTERNATIONAL COLLABORATIVE STUDY OF KIDNEY DISEASE

Investigator(s): Henry L. Barnett, M.D., Professor, Albert Einstein College of Medicine, Yeshiva University, 1300 Morris Park Avenue, Bronx, New York 10461
Purpose: To study the natural history and treatment of kidney disease in children.
Subjects: Infants and children with kidney disease.
Methods: Clinical surveys and therapeutic trials will be conducted on the natural history and treatment of several forms of kidney disease. Data are collected through 24 clinics located in 12 countries.
Duration: 1967-continuing.
Cooperating group(s): School of Medicine, Cornell University, Ithaca, New York; Medical School, State University of New York, Brooklyn; Medical School, Northwestern University, Chicago; Medical School, Temple University, Philadelphia; Medical School, University of Texas, Galveston.

32-SA-2 INFANT FEEDING PRACTICES IN LOUISIANA

Investigator(s): Rose Ann Langham, M.S., M.P.H., Chief, Nutrition Section, Louisiana State Department of Health, P. O. Box 60630, New Orleans, Louisiana 70160.
Purpose: To identify and collect physicians' recommendations for feeding infants, and to determine what and how infants are fed.
Subjects: Pediatricians, general practitioners, and pediatric residents in Louisiana; and 1,021 mothers who bring their infants to child health conferences in health units.
Methods: A questionnaire was mailed to the physicians, and the mothers in the study were interviewed. A cost study of infant foods was conducted.
Duration: September 1971-December 1973.

32-SD-1 RELATION OF PRENATAL AND PERINATAL VARIABLES TO MATERNAL-INFANT BEHAVIOR INTERACTIONS

Investigator(s): Gilbert W. Meier, Ph.D., Professor; and James D. Boismier, Ph.D., Assistant Professor, Nebraska Psychiatric Institute, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Nebraska 68105.
Purpose: To provide a behavioral description of (1) the human female as related to pregnancy and parturation, (2) the human infant, and (3) mother-infant interactions in terms of social stimulation and communication; and to identify particular experiences and behavioral interactions which are optimal and compensatory and which may increase the probability that the subsequent development of the high risk infant is normal.
Subjects: Approximately 20 pregnant women, ages 15 to 35, who are participating in the Mother-Infant Health Project; and the infants born of their pregnancies.
Methods: Observations with time sampling techniques will be made of infant behavior including regular measures of infant sleep-wakefulness and development, mothers interacting with their infants, and of women in caretaking situations both before and after delivery. Data will be analyzed through sequential and correlational analyses.
Duration: September 1972-March 1973.

Cooperating group(s): Center for Child Development and Mother-Infant Health Project, University of Nebraska.
Publications: Results of the study are available from the investigators.

32-SD-2 LONGITUDINAL STUDIES IN HUMAN REPRODUCTION

Investigator(s): P. S. S. Sundar Rao, M.A., M.P.H., F.S.S., Chief and Associate Professor, Department of Biostatistics, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.
Purpose: To study the interaction of gestational age and birthweight, and its relation to infant mortality and the incidence of congenital defects; to study maternal blood pressure before and during pregnancy, and its relation to toxaemias of pregnancy; and to study the relationship of consanguineous marriages to the continuation of pregnancy, infant mortality, the incidence of congenital defects, and the gestational age and birthweight of the child.
Subjects: Two samples of individuals were surveyed: urban residents of Vellore, India; and individuals who reside in a rural area outside the city.
Methods: Women interviewers, who were fluent in the local language, were enrolled in a course for auxiliary-nurse midwives, or some other basic course related to the health professions. The interviewers were given intensive orientation on the research projects and in interview methods. The interviewers reside in or near their survey areas and make routine visits once every 5 weeks to each family which has a married woman of childbearing age. Data are collected on the woman's menstruation, morbidity, and breast feeding. When the woman misses her regular period, the interviewer revisits her a week after her due date. If the woman still has not menstruated, a separate record of pregnancy is initiated. Upon termination of pregnancy, this record is completed with details of the termination. At birth, each newborn is measured for body weight, crown-heel length, crown-rump length, head circumference, and chest circumference. External anomalies are noted and recorded. A neonatal examination is carried out by a pediatrician for a sample of the infants. Each newborn is visited routinely at the end of months 1, 2, 3, 6, 9, and 12. Data are collected at each visit on feeding; milestones; morbidity; and measures of weight, length, and head and chest circumferences. When infant mortality occurs, details of the date and cause of death are recorded. Five percent of the families are revisited by the supervisory staff to rectify omissions and other deficiencies. All babies born with birthweights of 2,000 grams or less are rechecked by the supervisory staff.
Findings: A significant proportion of deliveries still takes place at the home of the women and are attended to by unskilled local midwives. There is almost no prenatal care. Approximately 50 percent of the marriages in the rural area and 30 percent in the urban area are consanguineous, consisting primarily of first cousin or uncle-niece matings. Fetal deaths comprised slightly over 25 percent of all pregnancy terminations in both groups. There were approximately 220 early, 18 intermediate, and 18 late fetal deaths for each 1,000 terminations. The infant mortality rate was approximately 110 per 1,000 live births, of which nearly half occurred during the neonatal period. Of the neonatal deaths, nearly two-thirds occurred within the first week of birth.
Duration: March 1969-December 1974.
Cooperating group(s): Department of Biostatistics, University of California; National Center for Health Statistics, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

32-SF-1 FAMILY INCLUSIVE PEDIATRIC PROGRAMS IN SEVERAL ADVANCED COUNTRIES

Investigator(s): Carol Hardgrove, M. A., Assistant Clinical Professor, Division of Family Health Care Nursing, University of California at San Francisco, San Francisco, California 94122.

Purpose: To study the means by which pediatric units of hospitals in England, Denmark, and Sweden accommodate parents for living-in programs, and to study how hospitals in these countries use play activities and staff for young children.

Subjects: Staff, parents, and patients in hospitals with active programs of play and/or parent living-in in England, Sweden, and Denmark.

Methods: Tape recorded interviews were conducted with hospital personnel and the parents of hospitalized children. Direct observations were made and slide photographs were used.

Findings: A new professional is being trained and utilized to great advantage in European hospitals. Play programs are more prevalent and managed more seriously in Europe than in the United States.

Duration: September 1972-June 1973.

Cooperating group(s): World Health Organization.

32-SG-1 ANALYSIS OF CHILD OUTPATIENT TREATMENT EFFECTIVENESS

Investigator(s): William H. Miller, Ph.D., Assistant Professor, Department of Psychiatry, Neuropsychiatric Institute, University of California at Los Angeles, Los Angeles, California 90024.

Purpose: To develop and test procedures that can provide effective child mental health care with a minimum of professional time and effort; and to develop procedural manuals for family assessment, intervention, and follow-up that will have wide application for child outpatient treatment facilities.

Subjects: Approximately 100 children, ages 3 to 9. Sixty children are outpatient clinic applicants; 40 are normal children.

Methods: The primary groups studied included (1) clinic families treated by group and individual parent behavioral training or regular individual child psychotherapy, and (2) families with no psychiatric history. An outcome predictor called "Responsivity Index of Parents" was used. Data were analyzed through regression techniques, primarily discriminant function analysis.

Findings: It was found that 70 to 80 percent of the families' responses to RX is predictable, using a maternal-Minnesota Multiphasic Personality Index derived predictor and one of four outcome categories. Twenty to 30 percent of the families significantly improved through automated videotape feedback training of the deviant child's mother. The home data collection system was found to be sensitive to basic relationship variables between the children and parents.

Duration: 1970-1975.

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  Southwestern Cooperative Educational Test 32-DH-6
  Stanford Achievement Test 32-OF-5
  Stanford-Binet Intelligence Scale 32-CE-3, 32-DB-1, 32-DC-4, 32-HE-1, 32-MC-2, 32-NG-3, 32-QE-1, 32-QE-5, 32-QE-6, 32-RB-1, 32-RF-3
  tactile skills 32-GE-3
  Tennessee Self-Concept Scale 32-KH-1
  Test of Basic Experiences 32-OF-5
  Thematic Apperception Test 32-JI-3, 32-OG-5
  Trial Making Test 32-JE-1
  Uzgiris-Hunt Scales 32-MC-1
  Van Camp Auditory Discrimination Test 32-CC-1
  Vineland Social Maturity Scale 32-OJ-6
  Wechsler Intelligence Scale for Children 32-DC-4, 32-DC-7, 32-ED-2, 32-JB-1, 32-JI-4
  Wechsler Preschool and Primary Scale of Intelligence 32-QE-6
  Wepman Auditory Discrimination Test 32-DC-7
  Wide Range Achievement Test 32-DC-4
  Wilcoxon Matched-Pairs Test 32-QE-6
  Witkin Embedded Figures Test 32-FA-1
Therapy techniques 32-JH-1
Token economy 32-JI-3
Twin studies 32-AA-6, 32-AA-15, 32-MB-2

Values 32-AA-2, 32-AA-8, 32-AA-10, 32-OJ-2.
  See also Aspirations.
Videotape 32-AA-17, 32-DG-2, 32-MB-1, 32-OK-1
Visual
  impairment 32-GE-2
  perception 32-CC-2, 32-CC-3, 32-DG-1, 32-DG-2, 32-DG-3, 32-GE-3, 32-NB-5, 32-OF-4, 32-PB-2
  stimulation 32-CD-1
Vocational guidance 32-NB-4

Welsh children 32-BA-1, 32-NB-4, 32-OF-3

OTHER ABSTRACTING JOURNALS AND SERVICES

Abstracts of Hospital Management Studies (quarterly), the Cooperative Information Center of Hospital Management Studies, University of Michigan, 220 East Huron Street, 419 City Center Building, Ann Arbor, Michigan 48108.

Abstracts on Criminology and Penology, Criminologica Foundation, Rapenburg 38, Leiden, The Netherlands.

Communication Disorders, Information Center for Hearing, Speech, and Disorders of Human Communication, The Johns Hopkins Medical Institutions, 310 Harriet Lane Home, Baltimore, Maryland 21205.

Current Index to Journals in Education (monthly), CCM Information Corporation, 909 Third Avenue, New York, New York 10020.

Dissertation Abstracts, University Microfilms, Ann Arbor, Michigan 48103. (Gives synopses of U.S. doctoral dissertations with an annual index.)

dsh Abstracts, Deafness, Speech and Hearing Publications, Gallaudet College, Washington, D.C. 20002.

Exceptional Child Education Abstracts (quarterly), The Council for Exceptional Children, Box 6034, Mid City Station, Washington, D.C. 20005.

Health Economic Studies Information Exchange, Division of Medical Care Administration, Public Health Service, Washington, D.C. 20402.

Index Medicus, National Institutes of Health. Order from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Language and Language Behavior Abstracts (quarterly), Center for Research on Language and Language Behavior, University of Michigan, Ann Arbor, Michigan 48104. Order from Subscription Manager, LLBA, Meredith Publishing Co., 440 Park Avenue South, New York, New York 10016.

Mental Retardation Abstracts, Division of Mental Retardation, Social and Rehabilitation Service, 330 Independence Avenue, S.W., Washington, D.C. 20201. Concerning abstracts write to Lemar J. Clevenger, Project Administrator, MRA, American Association of Mental Deficiency, 1601 West Broad Street, Columbus, Ohio 43223 or Miss Patricia Thuben, Project Officer, Division of Mental Retardation, Rehabilitation Services Administration, Social and Rehabilitation Service, Washington, D.C. 20201.

Nutrition Abstracts and Reviews, Commonwealth Bureau of Animal Nutrition, Bucksburn, Aberdeen AB2 9SB, Scotland.

Poverty and Human Resources Abstracts (bimonthly), Institute of Labor and Industrial Relations, University of Michigan-Wayne State University, P.O. Box 1567, Ann Arbor, Michigan 48106.

Psychological Abstracts, American Psychological Association, 1333 - 16th Street, N.W., Washington, D.C. 20036.

Rehabilitation Literature, National Easter Seal Society for Crippled Children and Adults, 2023 West Ogden Avenue, Chicago, Illinois 60612.

Research in Education (monthly), Leasco Systems and Research Corporation, 4833 Rugby Avenue, Bethesda, Maryland 20014.

Sociological Abstracts, 15 East 31st Street, New York, New York 10016.

The Educational Resources Information Center (formerly the Educational Research Information Center), better known as ERIC, supplies current research and research-related information to teachers, administrators, researchers, commercial organizations, and others. ERIC includes 20 clearinghouses, or documentation centers, located at universities and other institutions throughout the country. Each clearinghouse concentrates on a different subject matter area in the field of education. For complete information, write: Director of ERIC, Office of Education, U.S. Department of Health, Education, and Welfare, Washington, D.C. 20202.

The Excerpta Medica Foundation, New York Academy of Medicine Building, 2 East 103rd Street, New York, New York 10029, and 119-123 Herengracht, Amsterdam C, The Netherlands has established an abstracting service on pediatrics, available on a yearly subscription basis. In addition to abstracts, the Foundation provides to subscribers, at cost, photocopies and translations of complete articles.

The Minnesota Family Study Center supplies to interested scholars bibliographic information from the Inventory of Published Research in Marriage and Family Behavior. Address requests to: Director, Inventory of Published Research in Marriage and Family Behavior, Social Science Tower 1026, University of Minnesota, Minneapolis, Minnesota 55455.

The Library of the National Easter Seal Society for Crippled Children and Adults has initiated a photoduplication service for persons engaged in rehabilitation research. It is available without charge to personnel in educational or research institutions and health or welfare agencies, public or private. This service may provide professional literature that is not available in local libraries. For further information, write: Librarian, National Easter Seal Society, 2023 West Ogden Avenue, Chicago, Illinois 60612.

The Science Information Exchange, Smithsonian Institution, 209 Madison National Bank Building, 1730 M Street, N.W., Washington, D.C. 20036 provides to qualified investigators, for a fee, selected abstracts of current research supported by foundation or government grants. The exchange covers such fields as medicine, nursing, public health, nutrition, psychology, education, anthropology, mental health, and intercultural relations.

The Library of the National Bureau for Child Welfare (Voor Kinderbescherming), Stadhouderslaan 150, The Hague, The Netherlands publishes abstracts of articles in the field of child welfare each month. These are in Dutch, but those familiar with the Universal Decimal System would be able to understand something about the articles. The subscription rate for documentation on cards is 30 guilders (approximately $8.40).

RESEARCH RELATING TO CHILDREN

ERIC/ECE 805 West Pennsylvania Avenue
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If you are currently engaged in research on children or their families, we would appreciate your cooperation in providing a short summary of your work for inclusion in the next issue of *Research Relating to Children.*

The ERIC Clearinghouse on Early Childhood Education has been funded by the Office of Child Development to collect and disseminate information on current research relating to children and their families. It is the purpose of the clearinghouse to make such information available to research investigators and others concerned with research in child life.

The instructions on the third page of this form will serve as a guide for your summary. You will, of course, receive a free copy of the issue in which your study appears.

If you know of other researchers whose work might be of interest to the Clearinghouse, please give name(s) and address(es) below:

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Position

Organization and address

City State

Zip Code Phone ( )

SUMMARY OF RESEARCH PROJECT

TITLE:

PURPOSE:

SUBJECTS (Sample): (Please include number, age range, sex, description of subjects.)

METHODS: (Please discuss research design: control groups, methods of data collection, research instruments, unique features of research, statistical treatment.)

FINDINGS TO DATE:

DATE PROJECT INITIATED:		ESTIMATED TERMINAL DATE:
PRINCIPAL INVESTIGATOR(S):	DEGREE:	POSITION AND ORGANIZATION:

COOPERATING GROUPS: (In the research itself or in the research funding.)

PUBLICATION REFERENCES: (If no publication is planned, please indicate under what conditions data and results will be available.)

INSTRUCTIONS

Please report studies in progress or completed within the last year that:

center on children or their families in such areas as child growth and development, intelligence, personality, education, social adjustment, family life, physical and emotional disorders

concern service programs in the fields of child health, child welfare, or special education

Please DO NOT report:

animal studies

studies already published in sources generally available in major libraries across the country

demonstration projects, unless there is a formal plan for evaluation

regularly collected material such as annual reports, work preparatory to writing handbooks; directories

research based on secondary sources

Originally established in 1912, the Children's Bureau has consistently been concerned with all matters pertaining to the welfare of children and child life. In 1948, the Clearinghouse for Research in Child Life was established within the Bureau specifically to collect and disseminate information about current research relating to children. In July 1970, the ERIC Clearinghouse on Early Childhood Education, part of the national Educational Resources Information Center network, assumed the production of *Research Relating to Children*, a publication of the Bureau's Clearinghouse for Research in Child Life. The aims of this publication are consistent with the information analysis goals of the ERIC system. *Research Relating to Children* will provide information on current research relating to children and their families to educators, researchers and others in the area of child life who find the need for such a service.

Research Relating to Children
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Name ______________________________

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PUBLICATIONS

Bibliography on the Battered Child, revised July 1969. Copies free from the Children's Bureau, Office of Child Development, U. S. Department of Health, Education, and Welfare, Washington, D. C. 20201.

Research Relating to Emotionally Disturbed Children, 1968. A listing of studies reported to the Clearinghouse between 1956 and 1967, including publication references. Single copies free from the Children's Bureau; also available *directly* from the Government Printing Office, Washington, D. C. 20402, for $1.00. Do *not* send money to the Children's Bureau.

Research Relating to Mentally Retarded Chilren, 1966 (reprinted 1968). A listing of studies reported to the Clearinghouse between 1948 and 1965, including publication references. Single copies free from the Children's Bureau; also available *directly* from the Government Printing Office for 65 cents. Do *not* send money to the Children's Bureau.

*Research Relating to Children.** An inventory of abstracts of ongoing or recently completed studies, published about every six months. Single copies of the following issues are available without charge from the ERIC Clearinghouse on Early Childhood Education, 805 W. Pennsylvania Avenue, Urbana, Illinois 61801. (Dates indicate period during which the studies were reported to us.)

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